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CONSUMERS' RESEARCH

Bulletin

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CONSUMERS' RESEARCH

Vol. 12 • No. 2 **BULLETIN** August 1943

Off the Editor's Chest

RECENT EDITORIALS in CONSUMERS' RESEARCH BULLETIN regarding the numerous restrictions imposed on consumers and consumers' goods have called forth many comments, for nowadays many are thinking along these lines, and wondering why so many things are continually going wrong on the home front. We have assembled brief selections from what others, including economists, important officials, writers and editors are saying, and present them in the second column paralleling some of CR's own recent comments in the left-hand column. The quotations that follow, of course, represent only a very small sample of the material, now pouring forth in a veritable flood, in agreement with CR's general position with respect to mismanagement of the consumer economy under the government's numerous special administrators and controls.

From Consumers' Research Bulletin

Some government officials . . . [connected with food purchases abroad] have had an opportunity to discover the higher value of goods as compared to "unspendable" money as an incentive . . . Yet instead of making every effort to aid in *increasing production of needed civilian goods*, in this country, we find the OPA laboring and bringing forth, for example, a scheme for the simplification of men's shirts . . . [which] actually saved only 1 to 4 cents, . . . and heaven only knows at what cost to the American taxpayer who was paying the salaries and overhead for the "Planners" . . .—*CR Bulletin, May 1943, p. 24.*

The public will not accept (and the Congress knows it will not) a rate of taxation which will absorb the so-called "inflationary gap" and reduce civilians to the bare minimum of goods necessary for survival. Congress is coming to see very clearly that what is needed is *more tangible goods from factories and mines* and fewer grandiose plans, policies, and "directives" from Washington.—*CR Bulletin, June 1943, p. 26.*

Friends of big business, and government officials particularly, have shed many crocodile tears over the plight of the small businessman and manufacturer, who will, according to one government expert's speech after another, be pretty largely forced out of business in the period ahead . . . . —*December 1942, p. 2.*

From Other Sources

Milton Friedman of the National Bureau of Economic Research [New York City] said that the trouble with price fixing and rationing was that they did not increase the supply of civilian goods. Subsidies will not help, he said, because they ultimately will result in consumers having more money to spend and in addition increase the national deficit.—*News report of University of Chicago Round Table in Chicago Daily Tribune, June 28, 1943.*

The real cure for inflation is a plentiful supply of commodities, a goal made unattainable by governmental bungling which began long before the advent of war.—*Charles W. Schwartz, M.D., in a letter to the editor in N. Y. Herald Tribune of June 13, 1943.*

. . . . bureaucracy has fixed it so that, if you are in business, you can't turn around without calling up OPA to see if it is all right for you to turn around or not.

Most of the 14,000 answers, however, must have been easy. Small businessmen driven out of business by OPA, or trying desperately to stay in it, say that whatever you ask OPA the answer usually is No!—*From editorial in N.Y. World-Telegram, July 7, 1943.*

(*Continued on page 25*)

Scientific and Technical Experts and Editors: F. J. Schlink, R. Joyce, M. C. Phillips, A. R. Greenleaf. Technical and Editorial Assistants: E. B. Albright, Mary F. Roberts.

Symbols used to indicate sources of data and bases of ratings: **A**—recommended on basis of quality; **AA**—regarded as worthy of highest recommendation; **B**—intermediate with respect to quality; **C**—not recommended on basis of quality; cr—information from Consumers' Research's own tests or investigations; **1, 2, 3**—relative prices, **1** being low, **3** high. Note that price and quality are completely differentiated in CR's listings; **a quality judgment is independent of price**; 42, 43—year in which test was made or information obtained or organized by the staff of Consumers' Research.

It will be advantageous if you will, whenever possible, send prompt notice of change of address at least a month before it is to take effect, accompanying your notice with statement of your old address with name in full. At least three weeks' notice must be given in any case. Long advance notice, however, is not required in the case of military personnel, whose changes of address will gladly be handled whenever and as often as needed.

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The Consumers' Observation Post

CANDY MAKERS need to be quite ingenious these days in finding acceptable substitutes for scarce ingredients. That they have succeeded in doing so is a tribute to the inventiveness of the American businessman although the results are not always in the best interests of consumers' health. Some of the substitutes, however, are probably more nutritious than the ingredients they replace. Toasted soybean grits, corn flakes, or shredded wheat double for toasted coconut on marshmallows, rice flour replaces cornstarch, and an imitation cocoa can be made from roasted barley, wheat flour, oil, and flavoring. The chief difficulty is that no one has yet been able to make any large variety of candy without sweetening such as sugar, corn syrup (glucose), honey, or molasses.

* * *

RATIONING OF CLOTHING which has been predicted for many months may not be handled on a direct coupon basis. Plans are being explored to handle the problem of distribution indirectly. One suggestion has been to allow the dealer to handle the allotment on a voluntary basis. Other methods of allocation have suggested the apportionment of raw materials to the mills or of fabrics to the cutters-up who customarily supply the cut garments for sewing and finishing to the manufacturers. Many manufacturers are reported at present to be allotting their output to dealers on the basis of their orders in previous years. This works considerable hardship on the small town dress shop, which is getting more business now that gas rationing and crowded transportation facilities have produced a decided trend to home or neighborhood buying.

* * *

CHOCOLATE-FLAVORED MILK has been assumed in the past to have all the nutritive values of plain milk. Studies, however, at Massachusetts State College have brought to light the fact that the addition of cocoa to milk reduced its digestibility somewhat and hastened the destruction of vitamin C.

* * *

NEW BATHTUBS are now no longer available, according to a report at the convention of the National Association of Master Plumbers recently held in Chicago. Manufacture of such items was prohibited by government order over a year ago and current stocks are exhausted. Anyone who contemplates building a house that is to have modern improvements is advised to leave space and plan the piping for a tub to be installed later.

* * *

BEES are not just the busy manufacturers of a choice sweet, they are vitally necessary to the propagation of many crops. Without bees for pollination there is likely to be a severe shortage of seed for such crops as alfalfa, clover, carrots, cabbage, turnips, buckwheat, mustard, and sunflower. They are also important in the production of strawberries, blackberries, and blueberries. The U.S. Department of Agriculture urges that beekeepers should not be discouraged by the difficulties of getting supplies and of marketing their honey, pointing out the importance of the bees' contribution to the nation's food supply. Apparently, however, the D. of A. is unable to offer anything more constructive toward a solution of the beekeepers' problems than the kind words of the customary government press release.

* * *

WILL THE HARD-WON STOCKS of home canned produce from Victory Gardens be confiscated to help care for those who were not so provident? The question was

raised by a thoughtful person who sat in on a discussion of a little group of "serious thinkers" who were pondering over the idea of preparing the public for taking a house-to-house canvass of individual food stocks. It was vaguely suggested that a record of surpluses over and above everyday needs should be made for future reference in the event that the food shortage becomes so acute that mass feeding stations would need to be set up, particularly in cities.

* * *

WOOLENS, SHOES, AND TEXTILES of any sort should not be stored in hot attics. Textile experts have learned that heat is bad for stored fabrics and is apt to make them weak and tender. A dry but not hot closet on a lower floor will provide a better and safer storage place. Woolens, of course, should be carefully protected against moths by being stored in a tight package or garment bag with an abundance of paradichlorobenzene or naphthalene flakes.

* * *

HOUSEHOLD MOTORS that have been damaged or burnt out are difficult and expensive to repair. It costs just about as much to have a 1/3rd h.p. refrigerator motor rewound as you would have paid for a new motor before the war. Worse still, the motor repair shops are so jammed with work and have so much difficulty getting supplies and materials that are closely controlled by the War Production Board that they prefer not to take on such repair jobs if they can help it. The result is that many household appliances important to consumers' efficiency and to the maintenance of the food supply, may be out of operation for long periods. The major difficulty seems to be the inability of government officials in charge to see anything beyond the immediate problem of wire and copper required in making the repair; no government official seems to be at all concerned with the far greater costs in time and essential materials and services of not making the repair.

* * *

TAKE YOUR LUNCH if you must travel. Dining cars are crowded and food is of uncertain quality these days and you may have to look closely to find the filling in the sandwiches sold on trains and at some wayside stops. Chicago has found a solution to the problem. One of its enterprising firms, the Gaper Catering Service of Stop and Shop, 16 West Washington Street, is putting up train hampers. The menu has included fried chicken, hard boiled eggs, assorted sandwiches, cookies, fresh fruits and other good things. Hampers start at $3, with fried chicken $2 extra. It has been suggested that a $4 to $5 hamper will serve more than two people for a twenty-four hour trip. Individual boxes are as low as 60 cents. Unrationed foods are used.

* * *

MILDEW in certain sections of the country is troublesome, particularly in August. Where woodwork is seriously attacked, the best method of treatment is to heat the house from the central heating system—if there is one—with the doors and windows wide open. Floors and woodwork may be wiped with a damp cloth dipped in water and a small amount of kerosene or a 5 to 10 percent solution of borax in water. The Bureau of Human Nutrition and Home Economics of the Agricultural Research Administration also advises that where conditions are very bad in this respect, the householder should leave an open jar of calcium chloride (which must be renewed from time to time) in a damp closet to absorb the moisture.

* * *

THE SHORTAGE OF GASOLINE in many sections is bringing about a revival of the old reliable horse and buggy. Proper care of the horse is something that even a new owner recognizes is important, but he is not so apt to realize that special attention to the harness is important, too. Extension Service Engineer, A.C. Jacquot, in the Agricultural Leaders' Digest advises that extra precautions be taken to keep a harness in good repair. It should be cleaned thoroughly two or three times a year and then treated with warm neat's-foot oil or a good commercial harness oil rubbed thoroughly into the leather. After it has been allowed to dry slowly, the excess should be removed with a lather of harness soap.

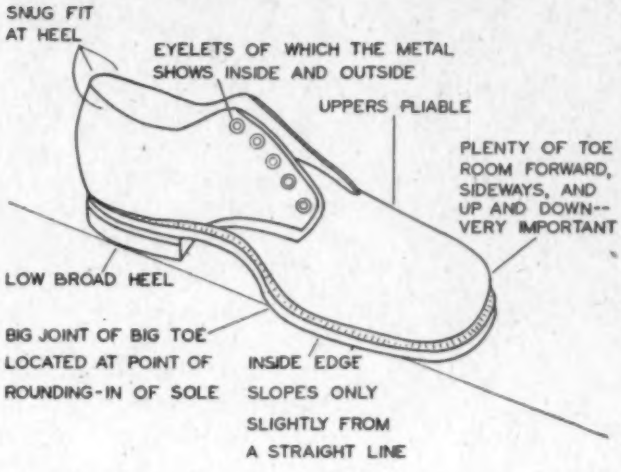
* * *

TWO SETS OF TEN POSTERS EACH prepared by the Bureau of Home Economics entitled "Fight Food Waste in the Home," and "Get the Good from Your Food," will be of interest to schools and institutions. (Available at 25c the set from the Superintendent of Documents, Government Printing Office, Washington, D.C.)

(The continuation of this section is on page 29)

Children's Shoes

THE DISCOVERY AND SELECTION of proper fitting, long-wearing children's shoes is a major family problem, and shoes for the youngster represent a large item of expense in the family budget, particularly in these days of scarce and often inferior merchandise. Whether it is the shoes or the wear the children give them, no one has conclusively determined, but many families are finding it quite impossible to keep within the three pairs allotted per child per year under the shoe rationing order.


SNUG FIT AT HEEL
EYELETS OF WHICH THE METAL SHOWS INSIDE AND OUTSIDE
UPPERS PLIABLE
PLENTY OF TOE ROOM FORWARD, SIDEWAYS, AND UP AND DOWN--VERY IMPORTANT
LOW BROAD HEEL
BIG JOINT OF BIG TOE LOCATED AT POINT OF ROUNDING-IN OF SOLE
INSIDE EDGE SLOPES ONLY SLIGHTLY FROM A STRAIGHT LINE

Desirable features of a child's shoe.

It is, of course, true that application may be made to the local rationing board for extra ration stamps when the family's combined allotment has been exhausted. But ration boards seem frequently to be of the opinion that children should patriotically go barefoot. One mother reported in despair that her young daughter who had a passion for skipping rope on cement sidewalks wore out a pair of shoes about every two weeks. A month was the most wear she could expect from a pair of everyday shoes, and she had tried every brand that was locally available.

In an effort to help harassed parents locate really good shoes for children, Consumers' Research scheduled tests of 15 well-known, widely distributed brands. A flat-heel oxford of essentially the same style was selected in the various brands. While there is very little difference between shoes for girls and shoes for boys in size 13, in most cases girls' shoes were purchased for test purposes.

Since the proper design and shape are all-important factors in a child's shoe, the shoes were subjected to a thorough examination by a competent orthopedist for the fundamental factors of design and construction from a foot-health standpoint. *Proper design for fit and comfort outweighs all other factors.* An ill-fitting shoe in childhood may result in serious injury to the child's foot and may be a major cause of foot troubles in later life. Remember that feet that have been deformed by the wearing of badly-designed poorly-fitted shoes, cannot be easily restored, if at all, to their normal healthy state.

The quality of leather in the sole and uppers of a shoe has an important bearing on the life of the shoe and determines how well and how long it keeps its good appearance. Samples of the leather in the uppers of the 15 brands of children's shoes in this project were given a special test to determine the "break" of the leather, which furnishes a basis for judging its type and quality, and the soles were measured for their resistance to abrasion. The sole region of the shoes was tested for resistance to water penetration, and tests were also made to determine the resistance of toe caps to scuffing. Parenthetically, it should be noted that the life of any ordinary shoe is drastically shortened by a thorough soaking. Children can help prolong the life of their shoes if they are always careful to wear rubbers in wet weather or when playing in wet grass. Frequent cleaning (with minimum of moisture) and regular shining of shoes also prolong life.

Leather may be chrome-tanned or vegetable-tanned. Chrome-tanned soles to be protected against becoming quickly water-soaked must be filled in the process of manufacture with a mixture of greases. This makes what is called a "waxed chrome leather". In very dry sections, however, the factor of water resistance may not be important. Unfortunately the water-resistant waxed chrome soles do not wear as well as unwaxed chrome soles. They do wear better than vegetable-tanned soles, and are often found on shoes that are expected to be subjected to hard wear.

Shoes with good leather soles protect the arch of the normal foot quite adequately. There are tricks used by some manufacturers, however, to simulate good leather soles with poor quality material. One trade journal, for example, reports the use of belly leather, which is very inferior, and wears poorly, for the soles of cheap shoes.

Mid-soles of the right material may add considerably to the life of the shoe and prevent wet from penetrating too rapidly—or they may just give the illusion of thick leather to the sole. The mid-sole of leather shown on the shoe in the center is to be preferred to the tarry ground scrap or cork mixture that is seen on the right or the paper mid-sole, that was so fragile that it was easily torn with the fingers, as shown on the left. Note the wooden shank outlined in white at the base of the mid-sole of the shoe on the right.

The stiffness which is one of the marks of good sole leather can be simulated by reinforcing the sole with fiber or veneer board. Sometimes the sole consists of a thin split layer of leather embossed to give it the appearance of "top grain," with a much thicker layer of paper above it.

In the current test, it was obvious that the quality of children's shoes has deteriorated since the previous test reported in CONSUMERS' RESEARCH BULLETIN, October 1940, and it was found that even where workmanship was good, the quality of materials used was often poor. As a substitute for the steel shank that is used in some cases to give stiffness to the sole, a crude shank made of a rough scrap of wood was sometimes employed, so weak that it could be broken with moderate pressure of the fingers. If the sole, however, is good leather of proper thickness, the shank is not particularly essential. A weak wooden shank that breaks is worse than none, of course.

The mid-sole is important in children's shoes because a child will often wear through the outer sole and will be walking on the mid-sole before his mother notices that his shoes need resoling. A mid-sole of good quality leather adds considerably to the wear-life of the sole. (The mid-sole, as the name suggests, lies between the innersole and the outer sole.) Frequently a filler is used in shoes instead of a leather mid-sole; this is commonly made of ground cork mixed with some sort of plastic cement. Other materials used by shoe manufacturers for this filling include sponge rubber, slab cork, and felt. The sole filling material in some of the shoes examined was held together by a tar-like substance which might tend to shift or flow when warm and could thus easily become bumpy or lumpy and make the shoe very uncomfortable. This filler may be pressed away from areas of pressure such as the ball of the foot, where it is most needed, or may be lost when the sole begins to wear through.

The inner sides of properly made shoes (as pointed out in CONSUMERS' RESEARCH BULLETIN, October 1940) should be in a practically straight line as shown in the sketch, page 5. A child's shoe should be fitted to allow at least one-half inch in length beyond the toe, which should be broad and rounded and not too low. The shoe should fit snugly from the back of the heel to the ball of the foot, but loosely from the ball to the end of the toes. Soles and uppers should be flexible, but the sole should not be thin or soft; it should be thick and firm enough for proper protection and support. Heels should be broad and low. The inside of a well-made shoe will be smooth, have no rough seams, bumps, or ridges. The toe lining should be of a good grade of smooth canvas, waterproofed or treated to resist perspiration. Counters and heel pads should be made of leather.

In this test, any shoe of incorrect design and shape was given a *C. Not Recommended* rating regardless of its workmanship, quality of materials, and other factors, because proper shape is of utmost importance, particularly for children, and cannot be compensated by good material or workmanship, important as these are.

B. Intermediate

Bass True Moccasin (G. H. Bass & Co., 35 Main St., Wilton, Me.) $5.17. Size 13D. Brown oxford, moccasin toe. A true moccasin. Toe shape and height, good. Toe unlined, but smooth. Shoe lining smooth. Counter too soft. Mid-sole of leather. No shank. Uppers, chrome side leather. Quality of rubber composition sole, as measured by thickness and abrasion resistance, poor. Resistance to water penetration, good; very little warping or other deformation of sole or wrinkling of upper after drying. Resistance of toe to scuffing, fair. Design and shape, good. Heel, rubber composition of a type which streaked linoleum badly and would act similarly on a hardwood floor.

Dr. Posner's Scientific Shoes (Dr. A. Posner Shoes, Inc., 137 Duane St.,

New York City) $4.50. Size 13½C. Brown oxford, flat-seam moccasin-type toe. Toe shape good. Toe, a bit low. No toe lining. The shoe was unlined, but seams had been carefully finished and were not rough. This shoe was considered satisfactory, and its construction was the best of the unlined shoes examined. Heel too high and too thick at back, due to insertion of wedge. Insole smooth. Counter, strong and resilient. There was no true mid-sole; instead a filler of a cork mixture with very little tarry or gummy binder was used; less desirable by far than a leather mid-sole. Had paper shank, which is not strong. Heel came off easily since nails were not clinched. Uppers, chrome retan, simulated grain. Quality of chrome tan sole, as measured by thickness and abrasion resistance, good. Resistance to water penetration, poor. Swelling of the filler material made a definite bulge in sole which would make shoes uncomfortable to walk on after a severe wetting. Noticeable wrinkling of upper after drying. Resistance of toe to scuffing, poor. Design and shape, good. Heel, leather and paper.

Educator (Educator Shoe Corp. of America, 2 Park Ave., N.Y.C.) $2.49. Size 13½C. Brown oxford, flat-seam moccasin-type toe. Toe shape and height, good. Toe lining, bumpy. Lining of shoe bumpy, with a very rough spot at the left just below the tongue. Counter, strong and resilient. Heel pad of thin fabrikoid material which covered well-clinched nails. Instead of a mid-sole, had filler made of mixture of scraps or similar material and a glue or binder of plastic or gummy nature. Had wooden shank which broke on moderate pressure with the fingers. Uppers, chrome retan. Quality of chrome tan sole, fair. Resistance to water penetration, good; very little warping of sole or wrinkling of upper resulted from wetting test. Resistance of toe to scuffing, poor. Design and shape, good. Heel, rubber composition and paper, marked linoleum very little.

Health Spot (The Musebeck Shoe Co., Danville, Ill.) $6.75. Size 13C. Brown oxford. Toe shape, very good, but should be slightly higher. Toe lining, smooth except at junction with the tongue, where it was a little rough. Shoe lining, very good. The insole was made into an "arch support" by carrying it up the side of the inner edge of the shoe. This was stiff and made the shoe slightly heavier, and undesirable for a normal foot. (See CR Bul. June '43, p. 19. If a support is required for weak feet, it should be of a type prescribed after a competent diagnosis and made to fit.) On this account the shoe could not be recommended. Counter, strong and resilient. Heel pad slightly concave, which is desirable. For mid-sole, a granular filler. Had metal shank (satisfactory). Uppers, chrome retan. Quality of chrome tan sole, fair. Resistance to water penetration, fair; marked warping of sole and noticeable wrinkling of upper. Resistance to scuffing, good. Design and shape excellent; one of the two best of brands tested. Heel, leather.

Indian Walk (Distributed by Foot Form Shoe Shops, Inc., 985 Madison Ave., N.Y.C.) $6.95. Size 13C. Brown oxford. Toe shape, excellent. Toe height, satisfactory but perhaps a little shallow. Toe lining, smooth. Lining of rest of shoe smooth. Counter, strong and resilient. Had a leather shank (satisfactory). For mid-sole, granular filler. Toe cap had leather under tip (desirable construction). Uppers, chrome side. Quality of vegetable tan, top grain sole, poor, worst of 15 shoes tested. Resistance to water penetration, fair; noticeable warping of sole and marked wrinkling of upper. Resistance of toe cap to scuffing, poor. Design and shape, excellent; one of the two best of the brands tested. Heel, leather.

C. Not Recommended

Action-Airs (Distributed by Sears, Roebuck & Co., Philadelphia; Cat. No. 15—2703) $3.95 plus postage. Size 13½C. Heel pad marked "Carefree." Brown oxford, moccasin-style toe. Toe shape too narrow and deviated from straight line at inside edge. Upper leather very stiff and likely to cause pressure. Heel poorly attached and nails not clinched. Heel was loose and during examination was removed from shoe without tools, simply by moderate force of the hand. Wood shank was strong and did not break under pressure. Uppers, chrome retan. Quality of vegetable tan, top grain sole, poor. Resistance to water penetration, poor; marked warping of sole and noticeable wrinkling of upper. Resistance of toe to scuffing, poor. Design and shape, poor. Heel, leather and paper.

Blue Band (Distributed by Montgomery Ward, Baltimore; Cat. No. 24—5694) $3.29 plus postage. Size 13C. Brown oxford, moccasin-style toe. Toe shape a little narrow and deviated from a straight line at the inside edge. Had wood shank which broke on moderate pressure with the fingers. Uppers, chrome retan. Quality of chrome tan sole, very good. Resistance to water penetration, good; noticeable warping of sole and negligible wrinkling of upper. Resistance of toe to scuffing, poor. Design and shape, poor. Heel, rubber composition and leather, marked linoleum very badly.

Buster Brown (Brown Shoe Co., St. Louis) $4.50. Size 13½C. Brown oxford with *Dura-Plastic* Tip. Toe shape good but deviated from straight line at inside edge. Counter, strong and resilient. Unshaped wood shank which broke on slight pressure. Uppers, chrome belly leather, lowest quality of the upper leathers having top grain. Quality of chrome tan sole, good. Resistance to water penetration, poor; marked warping of sole and wrinkling of upper. Resistance of toe cap to scuffing, good. Design and shape, fair. Heel, rubber composition and leather, marked linoleum very badly.

Campus Junior (A. Werman & Sons, Inc., 282 Belmont Ave., Brooklyn, N.Y.; purchased at McCrory Stores, Philadelphia, available at other variety chain stores) $1.59. Size 13 med. Brown oxford, moccasin-type toe. Toe shape satisfactory, but upper very narrow at toe for size of shoe. Toe height too low. Shoe deviated somewhat from a straight line at inside edge. Lining smooth, but of coarse texture. Counter had tendency to break and was not strong. Mid-sole of paper. No shank. Toe box was of impregnated cloth which was stiff but did not break. Uppers, chrome retan leather. Quality of chrome tan leather sole, as measured by thickness and abrasion resistance, fair. Resistance to water penetration, poor; and wetting test gave marked warping of sole and wrinkling of upper. Resistance of toe to scuffing, fair. Design and shape, fair. Heel, rubber composition, marked floor material badly. If rated on a combined price and quality basis, this shoe might be said to offer a lot for $1.59.

Classmates (Ideal Shoe Mfg. Co., Milwaukee) $3.45. Size 13C. Brown oxford. Toe too narrow and devi-

ated from a straight line at inside edge. Toe not quite high enough. Counter, strong and resilient. Steel shank which, however, was narrow and unshaped. Uppers, chrome retan. Quality of chrome tan sole, very good. Resistance to water penetration, poor; marked warping of sole and wrinkling of leather. Resistance of toe cap to scuffing, poor. Design and shape, poor. Heel, rubber composition, leather, and paper, marked linoleum only a little.

Play Wear (Curtis-Stephens-Embry Co., Reading, Pa.) $2.98. Size 13D. Brown oxford. Shoe too narrow. Toe shape, good, although it deviated somewhat from a straight line at inside edge. Toe height, low. Counter, strong and resilient. Wood shank which could be easily broken by the fingers. Uppers, chrome retan. Quality of vegetable tan, top grain sole, poor. Resistance to water penetration, poor; marked warping of sole and wrinkling of upper. Resistance of toe cap to scuffing, good. Design and shape, fair. Heel, rubber composition and paper, marked linoleum very badly.

Poll-Parrot (Star Brand Shoemakers, branch of International Shoe Co., St. Louis) $4. Size 13½C. Brown oxford. Toe shape, fair. Toe height would be satisfactory if the shoe were wide enough. Heel pad was bumpy and showed unevenness; nails beneath it poorly finished and clinched. Counter, strong and resilient. No shank. Toe box brittle and stiff and of an impregnated cloth which cracked easily. Uppers, chrome retan. Quality of vegetable tan, top grain sole, fair. Resistance to water penetration, poor; very little warping or wrinkling of upper. Resistance of toe to scuffing, poor. Design and shape, fair. Heel, rubber composition and leather, marked linoleum only a little.

Red Band (Distributed by Montgomery Ward, Baltimore; Cat. No. 24—2086) $3.25 plus postage. Size 2½D. Boys' shoes. Brown oxford, moccasin-style toe. Toe shape too narrow and deviated from straight line at inside edge. Toe height, satisfactory. Paper toe box which would tend to form bumps if it should be broken. Uppers, chrome retan. Quality of vegetable tan sole (not top grain), poor. Resistance to water penetration, poor; marked warping of sole and wrinkling of upper. Resistance of toe to scuffing, fair. Design and shape, poor. Heel, rubber composition, marked linoleum only a little.

Red Goose (Red Goose Div. of International Shoe Co., St. Louis) $3.75. Size 13½C. Brown oxford. Essentially the same shoe as *Poll-Parrot* (see col. 1, this page). Uppers, chrome retan. Quality of vegetable tan, top grain sole, poor. Resistance to water penetration, poor; very little warping of sole and negligible wrinkling of upper. Resistance of toe cap to scuffing, poor. Design and shape, fair. Heel, rubber composition and leather, marked linoleum very badly.

Thom McAn (Distributed by Thom McAn Shoe Co., 25 W. 43 St., N.Y.C.) $2.99. Size 13C. Brown oxford. Toe too rounded, not sufficiently blunt, and a little narrow. Toe height, low. Uppers, chrome retan, simulated grain. Quality of vegetable tan, top grain sole, poor. Resistance to water penetration, poor; noticeable warping of sole and marked wrinkling of upper. Resistance of toe cap to scuffing, poor. Design and shape, poor. Heel, rubber composition and paper, marked linoleum badly.

Cleaning of Silverware

THOSE who have found satisfactory and convenient the often-described electrolytic method of cleaning silverware will be interested to know of a new product called *Amron*.

Amron has been found very much more satisfactory than the salt solution that has often been recommended, and was several times faster in action than a bicarbonate of soda (baking soda) solution, cleaning *when the process is conducted at a low temperature*, with solution at around 120°F, instead of at boiling point. (At boiling, *Amron* worked much faster than salt solution, and at about the same speed as bicarbonate of soda.) *Amron* has an advantage also in having more detergent or dirt removing action than the bicarbonate.

The product, which contains sodium pyrophosphate and a well-known wetting agent *Aerosol* is manufactured by the Norma Chemical Co., Stevens Avenue and Wilson Place, Mount Vernon, N.Y., is sold at retail in four-pound cartons at $1 plus 25c postage east of the Rockies, 35c west of the Rockies.

To use the product the silverware is placed in a bright aluminum pan and covered with hot water at around 120°F, to which has been added ½ oz. of *Amron* for each quart of water used. A heavy tarnish should be removed in this manner in as little as two or three minutes. (The warm solution rather than a boiling water solution has advantages.) After the silverware is cleaned, it should be wiped and polished with a soft cloth or with a little whiting and ammonia mixture (precipitated chalk or a fine grade of whiting—the grade known as "extra gilders"—which has been moistened with a mixture of one part of ammonia in 8 or 10 parts of water). An enamelware pan may be used instead of an aluminum pan if the silverware placed in it is in contact with a sheet of bright aluminum or zinc. Before silver is put away, it should be rinsed very thoroughly with hot water and then left to dry.

The electrolytic or chemical method of cleaning should not be used for silverware which has a French grey or oxidized finish. For such pieces as silver candle sticks or certain kinds of table knives which are not in one piece but which are in two parts, or hollow and held together or weighted by a thermoplastic cement, there should be no danger of separation if the solution is kept below 120°F, though the cement in such silverware would often be softened if the cleaning were done in a boiling solution of baking soda or salt and soda.

The Truth about Home Dehydration of Fruits and Vegetables

This article does not purport to be an exhaustive discussion of home food drying or of dehydrators, nor is one needed, for newspapers, magazines, and government bulletins have of late been full of the topic. We are attempting here to present to our readers a general resumé of the subject, particularly to caution consumers on the risk of wasting food by overconfidence in the merits of fruit and vegetable drying as a method of preservation. We are including also other interesting points not *likely to be found in articles in magazines and government bulletins. In any case, those who decide to try the drying method should obtain specific instructions from their own state college of agriculture or agricultural experiment station (many, perhaps most of these agencies have recently issued mimeographed or printed bulletins), or from one of the specific sources listed at the end of this article.*

PRESERVING foods by drying is by no means a new development, for drying of certain fruits and vegetables for future use has been practiced far back into ancient times in those parts of the world with dry, sunny climates. In such lands dates, figs, raisins have been dried in the sun, as far back as the memory of man runs. Recently great prominence has been given to this method of preserving food, under the modern term "dehydration," on account of its presumed value for preserving the surplus food from victory gardens. Much of such food, it was thought, because of the government's stopping production of pressure cookers, could not be safely canned by housewives of limited or no experience in food preservation.

It is clear from the studies CR has made that home dehydration is not the royal road to good and plentiful food stocks in the home which many writers and consumers are inclined to assume and which much publicity has promised. Rather, *we believe, home food drying should be considered, if at all, chiefly as a method to supplement, but not to supplant, the tried and proven methods of food preservation, such as canning or freezing* or be used only in cases where preservation by canning is for some reason out of the question.

Obvious advantages of drying are a great reduction in weight (about 3/4 to 4/5) and bulk (3/4), but dehydrated foods have certain disadvantages, foremost of which perhaps are the marked losses of flavor and the very large losses in vitamin content. (Loss of flavor does not occur in every case.) At Michigan State College, Dr. Thelma Porter is reported as having found that home drying of vegetables is almost completely destructive of their vitamin C content. Even when instructions issued by one of the country's leading experiment stations were followed to the letter, including the all-important blanching, the "results obtained were nutritionally deplorable," as one food-trade paper expresses it.

The executive secretary of the Food and Nutrition Board of the National Research Council concedes that there is a serious vitamin C destruction, but he believes that "In this year when it is imperative that we conserve all possible food for use through the coming winter, it is not unwise to encourage home dehydration of vegetable and fruit foods." The commercial dehydrators do not agree, fearing that because home dehydration *seems* deceptively easy, many will try it with disappointing results, and dehydrated foods will receive a bad reputation that will be difficult, if not impossible, to eradicate or overcome when the war is over, and commercially-dehydrated foods, processed and handled with skill and precision, become available on a large scale to consumers. This announcement might sound like "sour grapes" if it were not for the fact that commercial firms, even with costly, precise automatic temperature, humidity, and air-movement control equipment, are finding it difficult to produce uniformly high-quality dehydrated foods. It is obvious that amateurs, with the more or less crude equipment they will usually have at their disposal, some of it lacking even elementary draft regulation and any sort of humidity and temperature control, may obtain extremely poor results, and process quantities of foods which will prove in many cases to have been so much fresh food wasted—when the time comes to cook and eat it during the period of winter scarcity.

The only official or govern-

mental bulletins we have noted which have expressed the needed note of caution with regard to the problem of home-drying are those from the University of Illinois' and Alabama Polytechnic Institute's Extension Services. The Alabama bulletin speaks plainly about the desirability of working on a very small scale to begin with, and in warning about the deterioration in flavor which is likely to occur with dried vegetables (with which this problem of deterioration is much more serious than with dried fruits). With dried vegetables particularly, although the product may be satisfactory at the beginning, it very often undergoes a gradual loss in palatability, and may develop an unpleasant, haylike odor. The Alabama bulletin, by Miss Lavada Curtis, sums up the situation well, in this form: "It is not wise to undertake the preservation of these materials by a method that is at best temporary and hazardous, when an equal amount of labor spent in canning will yield a product that is protected against deterioration."

Recently Cornell University's College of Home Economics has sent out a release warning New York State consumers that dried foods will not suit everyone, and that color may be lost, and unpalatable odors and flavors may develop.

The Cornell teachers advise that to prevent *heavy* loss of vitamins and minerals, the blanching process before drying should be done in steam rather than in water, and further that to save as many minerals and vitamins as possible, the water in which the dried foods are later soaked (rehydrated) before cooking should also be used in the cooking. They say further that either slow, even drying or some form of humidity control is essential; otherwise a hard outside layer will develop on the food particles which will prevent the escape of the moisture from the interior of the food. Temperature of the food should, during the drying period, range between 120°F and 150°F. At no time should the temperature exceed 150°F. Some foods should be finished off at 140°F or less. Vegetables must be hard and brittle to be dry enough not to mould and ferment; fruits should be spongy, but not moist enough so that any juice can be pressed out. Drying time will vary from 4 to 30 hours, depending upon the type of food being dried and the type of equipment used, with an average time requirement for vegetables of about 7 to 8 hours in good equipment up to 10 hours in poor equipment. (20 to 30 hours are required for prunes and plums.) If the dryer purchased or built is not designed to give even temperature and air circulation over all of the trays, the trays themselves must be frequently interchanged during the drying process so that their contents will receive equal treatment. The long drying process cannot be left to run itself, for it requires more or less periodic attention from beginning to end of the drying period, unless the dryer is one that has been really designed, in an engineering sense, and has uniform air flow and thermostatically controlled temperature.

There is certainly some risk of botulism (or what used to be called ptomaine poisoning), but to what extent this is a practical danger authorities are not in agreement. (There is a growing belief, however, that the danger of botulinus poisoning in canning, with proper methods and care, but without use of a pressure cooker, has been greatly exaggerated by official publications on home canning practices. However, the prevalence of the botulinus bacillus varies in different parts of the country, and there is certainly some danger in certain parts of the U.S. In this connection California has been particularly mentioned.)

Types of Equipment Available

The cheap so-called dehydrators now available in department stores are actually not dehydrators at all; it would be something of a compliment in most cases to call them crude food dryers or evaporators. A true dehydrator has forced-air circulation or other effective method of distributing the hot air evenly, and provides for circulating the hot air two or three times to build up the humidity of the moving air; this tends to prevent excessive hardening of the outside layer of the food. (Recirculation also reduces operating costs, by reducing the amount of air that must be heated.) A dehydrator should be equipped with a thermostatic control with an adjustable range of 120°F to 170°F; and the cabinet really ought to have insulated walls, to conserve heat and so save fuel or electricity.

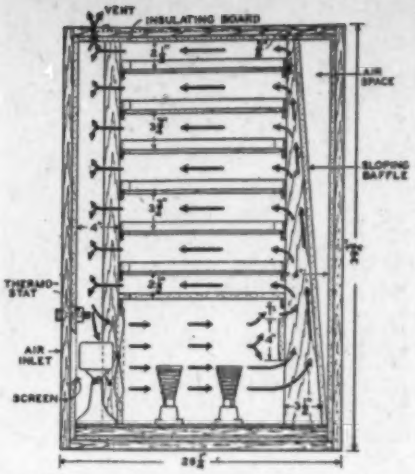
There are essentially three types of drying devices available—one is intended for use in the oven of a gas or electric stove, another is a self-contained unit which uses an electric lamp or lamps, radiant heater, oil stove, or other source of heat, but depends upon na-

tural circulation of air. The third type has forced circulation of air.

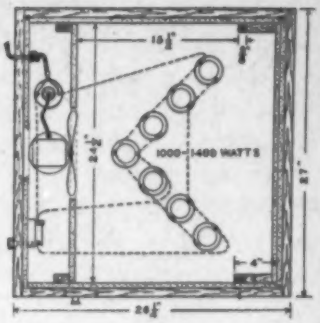
The oven type, in the experience of experts, cannot be used satisfactorily in the majority of stoves because of the difficulty in maintaining the required low temperature and also obtaining adequate air circulation. Ovens used in this manner without forced air circulation produce poor results, and the operating costs are high.

The self-contained unit in its simplest form is essentially a box depending on natural draft to produce air flow and equipped with trays consisting of frames covered with cheesecloth, screening, or wood slats. Such units sell knocked down, for the purchasers to assemble, at from $6 up, without any sort of heating unit. One of these products, known as the *Victory Home Dehydrator*, manufactured by Lansdowne and Moody, Houston, Texas, was purchased from a large department store in the East and examined by Consumers' Research. At $5.95 it was greatly overpriced, for it consisted of a few strips of wood and pieces of thin wallboard (3/16 inch) poorly and inaccurately cut to size, and when assembled, following the instructions provided (which themselves left much to be desired) produced a poor-looking and very crude job with badly-fitting trays. Rather than purchase such contraptions, now being widely offered in department and other stores, the consumer interested in home dehydrators would do well to build his own, and by so doing he would not only save money, but obtain a product that comes somewhere near to being correctly designed and of workable size.

The forced circulation type of dehydrator with automatic temperature and humidity controls is likely to produce the best results. The best designs of this type, having the automatic features, do not call for attention from the operator during the drying period.



Elevation or vertical view in section.



Sectional plan view.

The Cornell "Type C" Food Dehydrator

A good design which has automatic control of temperature and uses a fan for automatic circulation of air, together with a system of dividing the warm air current between the trays so that shifting of the trays is not necessary during the drying period. Cost to make, exclusive of fan, about $12. *(The fan can be an ordinary household electric fan.) Cost of operation, about 2.3 to 4 cents per pound of "wet weight" of food (with electricity at 4 cents per kwh.).*

Vegetables Most Suitable for Drying

There seems to be some difference of opinion as to what vegetables are most suitable for drying. One source regards corn, beets, pumpkins, apples, peaches, cherries, prune plums, herbs, celery leaves, peppers and onions as most suitable; another source considers that lima beans, carrots, onions, peas, peppers, sweet potatoes, apples, peaches, and pears are most satisfactory. Any produce selected for drying must be fresh, firm, ripe, and perfectly clean. Tomatoes should always be preserved by canning.

Storing Dehydrated Foods

When foods are dehydrated they must be stored in airtight containers to prevent reabsorption of moisture and access of air (which would cause a further loss of the already greatly reduced food value and flavor). Each container used should be of a size to hold fruits and vegetables in an amount sufficient for one meal; the sealed cans or jars should be stored in a dark, cool, and dry place. Examine the stored dry food from time to time to note its condition, especially its continued freedom from moisture.

* * *

Those who will have large surpluses from their gardens which they are unable to can or preserve would be well advised to experiment on a very small scale before buying expensive equipment, by drying a few sample vegetables, in order to determine which, if any, of the dried foodstuffs they and their families would care to eat, after they have been processed. It is practicable to build

a dryer from one of the plans given in the bulletins listed at the end of this article. *In building or buying a home drying unit it is important not to use any* wallboard *of a sort that may have been impregnated with an arsenic compound as a protection against insect infestation (at least one well-known brand is), and be sure that all flammable parts are far enough away from the source of heat or are effectively insulated so as not to constitute a fire hazard under any conditions.* Many consumers are inclined to forget just how hot a large electric lamp gets, or how easily it might set fire to dry combustible material which is near to it for a considerable period of time.

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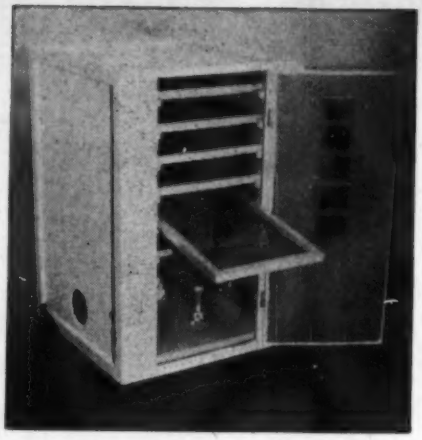
Consumers' Research acknowledges with thanks some material which has been used in the above article, and helpful suggestions and criticisms kindly contributed by Professor Forrest B. Wright of Cornell University, Department of Agricultural Engineering. Thanks are also due to Professor B. B. Robb for his advice and cooperation.



Front View of Cornell "C" Dehydrator

Brief Bibliography of Important Literature on Home Drying

Drying Foods for Victory Meals—Farmers' Bulletin 1918. U.S. Dept. of Agriculture. 10c, from Superintendent of Documents, Washington, D.C.

Farm and Home Drying of Fruits and Vegetables—Farmers' Bulletin 984. U.S. Dept. of Agriculture. 5c, from Superintendent of Documents, Washington, D.C.

Building a Food Dehydrator for Home Use—Circular A, Eng. 346. Dehydrating Fruits and Vegetables at Home—Circular 558. University of Illinois, Department of Agricultural Engineering, Urbana, Ill.

Home Drying of Fruits and Vegetables. Ohio State University, Columbus, Ohio.

Designs for Simple Home-Made Driers with Instructions for Their Use. New York State College of Home Economics, Cornell University, Ithaca, N.Y.

Dehydration of Fruits and Vegetables in the Home—Bulletin 183. University of Tennessee Agricultural Experiment Station, Knoxville, Tenn.

Drying of Vegetables and Fruits in the Home. University of California Agricultural Extension Service, Berkeley, Calif.

The Home Evaporator—Extension Folder W-7. Drying of Fruits and Vegetables—Extension Folder W-8. University of Arizona College of Agriculture, Agricultural Extension Service, Tucson, Arizona.

Small Dehydrators for Vegetables. Massachusetts Agricultural Experiment Station, Amherst, Mass.

Homemade Driers, Their Construction and Use—Extension Circular 709. Dept. of Agricultural Engineering, University of Nebraska, Lincoln, Nebr.

Drying Fruits and Vegetables at Home—Extension Bulletin 618. N.Y. State College of Agriculture, Cornell University, Ithaca, N.Y.

How to Dehydrate Food at Home—Circular 244. Alabama Polytechnic Institute Extension Service, Auburn, Ala.

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Victory Garden Soils

THE state of Virginia is already lamenting the impossibility of carrying on soil analysis on all soil samples received from small plots. The department finds that such analyses are practicable only when farmers or other land owners have a soil problem on a considerable acreage. The useful comment is made that there is no fertilizer recommendation which will enable a gardener to grow vegetables successfully on dead-poor land or land that may be covered with subsoil as a result of an excavation. Such land *can* be put into condition with fertilizer, barnyard manure, and the turning under of legumes, but hardly under a year.

For general vegetable crop results in most parts of Virginia, the State Agric. Dept. names an application of 3-8-7, the "Victory garden" fertilizer at 500 to 1200 lb. per acre as a workable uniform recommendation. If land has been recently limed, additional lime is not usually necessary for vegetable growing.

Land for vegetables should be reasonably dry, and not too close to sidewalks, brick buildings, or concrete.

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Warmth without Wool

THE WARMTH OF APPAREL FABRICS, blankets, and other textiles is considerably increased by application of aluminum paint, according to experiments by Professor Clifford Kirkpatrick of the University of Minnesota.

Conservation of body heat, he points out, becomes especially important in time of war when soldiers and refugees have lain for hours protected from the cold only by the clothing they could carry on their backs.

The application of heat-reflecting metallic coatings to textiles to insulate against the escape of body heat (or penetration of cold, as the layman often thinks of it) will very likely prove to be a discovery of great importance in the textile field.

Wallpaper

MANY PEOPLE ARE finding that one of the best and most satisfactory ways to spend money today, with the consumer's market of available goods very much limited, is to spend it on beautifying the home, presupposing, of course, that the purchase of war bonds and stamps has received its due allotment of the family funds.

As the interior walls of a house cover the largest area in any room, their treatment contributes greatly to a room's appearance. A freshly-papered room is something of a morale-builder, in much the same way as a new hat affords tonic values to a woman. With automobile travel greatly curtailed, many people, even though they may have victory gardens to tend, will have time on their hands which they could spend doing their own wallpapering—a job which may have to be done by the home-folks in certain areas where labor shortages are acute.

Paper hanging requires less skill than many would suppose, and a great deal of satisfaction can be obtained by doing one's own work. The problems of the homeowner hanging paper will be discussed in an early BULLETIN.

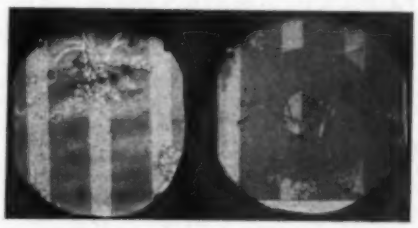
While wallpaper has been affected by war regulations, which have reduced the production of paper by 40%, and curtailed patterns and styles, the effects are not particularly serious from the consumer's standpoint. A sufficiently wide variety of patterns remains available to give the consumer a satisfactory range of choice.

Before making a selection of wallpaper, some knowledge of its durability, quality, and properties is essential, particularly where the paper is to be hung by a professional, in which case the cost of the paper is the smallest portion of the total cost. Remember that it costs just as much to hang poor-quality paper as it does to hang good-quality paper.

Wallpaper comes in three classifications:

Type 1. "Skins" or "ungrounded" paper. These are nothing more than raw paper stock directly printed with color and design. Such wallpaper is the cheapest sort, will readily fade, is not washable, and should be avoided unless for some very exceptional use.

Type 2. *Fade-proof*, but not washable. Papers of this type are "grounded" papers, which means that the raw paper has been given a coat of clay and a so-called sunfast color. This coating is added for the purpose of protecting the paper from light, which causes deterioration of the paper stock.



Two samples of the same brand of wallpaper not claimed to be washable, before and after treatment in a specially constructed washing-test machine. Note complete obliteration of pattern within a ring in the righthand picture.

Samples of papers claimed to be washable but which were not in fact washable reacted in the same manner but to a lesser degree, impossible to show satisfactorily in a half-tone picture, but nevertheless sufficient to be intolerable in paper as seen on the wall of a room. This test was not unduly severe for it had no noticeable deteriorating effect at all on a number of papers that were truly washable.

Type 3. *Fade-proof* and *washable* papers. These are similar to Type 2 papers, except that the colors are not only fade-resistant, but insoluble in water. The terms "washable" or "water-fast" are very much misunderstood by the average person. Their only real implication is with regard to color solubility. It is well to remember that "washable" papers are not impervious to rubbing, and too much or too vigorous rubbing on a dirt spot will damage washable papers. Directions for washing such papers invariably stress the use of suds, light pressure, thorough rinsing, and cleaning of small areas at a time.

Both Types 2 and 3 should be clearly marked on the selvage edge by the maker to show whether they are intended to be fade-proof or washable or both. This, however, does not guarantee that the papers will be as claimed, for in the test recently conducted by Consumers' Research, some of the papers did not live up to their "fade-proof" or "washable" marking.

There are two tests that a consumer should make if there is any doubt as to the washability or fade-proof claims of a paper. Take a clean wet soft cloth and rub it over a small area of the sample at least 25 times, using moderate pressure. This will ruin the pattern of a non-washable paper. No attention should be paid to any

coloring which may come off on the cloth, for if the pattern remains sharply defined after this treatment, it is properly classed as paper intended to be washable. To test the fade-proof qualities, obtain a small sample of the paper and hang it in the sun for 24 hours with a portion of the paper protected against the light by black paper, or a piece of thin cardboard. If no color difference is evident as between the exposed sample and the protected part, it is reasonably sure that the paper is in the fade-proof class.

While non-washable papers may be reasonably satisfactory where there are no children to get dirty finger-marks on the walls, the washable papers are much better, and especially if they are to be hung by amateurs, for until experience is gained in the art of hanging wallpaper, paste is likely to get on the surface, and with a washable paper this can be removed without injuring the pattern. On non-washable paper, removal of a small spot of paste with a dry cloth is often possible but not always successfully done.

When purchasing wallpaper, a consumer can only judge its properties by its "feel" of thickness and stiffness. Beginners should avoid all very flimsy papers, for, unless extreme care is used, they are likely to tear readily while being hung. Extra-heavy papers should likewise be avoided by beginners, as they are more difficult to hang than ordinary-weight papers.

Size of Wallpaper

Wallpaper is made in various widths, but the 18-inch width is the most common. A "single roll" of 18-inch wallpaper is 8 yards long. The 18-inch size, however, is usually sold in "double rolls" of 16 yards. In the 30-inch paper, the length of a single roll is 5 yards, and it is usually sold in what is called a "bolt" of 15 yards. A single roll of 18-inch wallpaper covers approximately the same area as a single roll of 30-inch size, or around 36 square feet.

Estimating the Amount of Wallpaper Required

If the purchaser does not wish to go to the trouble of closely calculating the amount of wallpaper required, he can measure the size of the room, including the ceiling height, and consult a table available at all wallpaper distributors, which gives at a glance the number of rolls and yards of border required for rooms of a given size. If desired, one single roll of paper can be deducted from this amount for every two ordinary-sized doors or windows, or for every 36 square feet of opening. It is a good policy, however, to order rather more paper than required, for wallpaper is printed in runs, and if it is ever necessary to purchase additional paper at a later date for a patching or repairing job, or if some alteration is made in the room, the new roll will probably be from a different run, and the colors are likely to be a trifle lighter or darker in tone. The run number is always printed on the selvage and when a lot is purchased, the individual rolls should be checked to see that all are from the same run.

Trimming of Wallpaper

While this subject will be covered more fully in a subsequent article on wallpaper hanging, it is important to mention at this stage that wallpaper is shipped to the distributor untrimmed, that is, each edge of the paper has a "selvage edge," one or both of which must be removed before the paper is hung. The paper is shipped in this manner to protect the edges during transit and the "selvage" can be easily removed by the distributor, if the paper is purchased from a local store, using a specially-made machine for this job; however, these machines do not always trim the edge perfectly true.

Whether one or two selvage edges are to be removed will depend on the method used in hanging the paper. If the paper is to be lapped, only one of the edges will need to be removed. If it is to be butt-joined, the preferable method, both edges are removed. Some makes of paper have a patented perforated selvage edge which is removed after the paper has been pasted, by gently pulling on it. While this method is satisfactory where the paper is to be lapped, it is not so satisfactory when the paper is to be butted, for it does not provide the perfectly straight, clean edge that is needed.

CR's Tests

In selecting the samples for test, the 12 mills considered largest producers in the country were originally chosen to be represented, but because of difficulties encountered in purchasing samples, two of these mills were omitted, and samples from three additional mills and from Sears, Roebuck, Montgomery Ward and the Decorator's Wallpaper Co., a large distributor, were substituted.

Colors were taken as available, with preference for the popular blues and greens (which

are also colors that tend to be less light-resistant than some others). Papers were tested for bursting strength, basis weight, fastness to light in a Fadeometer, fastness to crocking, washability and width.

Of the 20 samples tested, 19 were represented by the vendor as "washable," "water-resistant," or "water-fast," but only 12 samples made such claims on the selvage of the paper, and these are indicated in the listings. One maker (Strahan) claimed that his paper "exceeds government specifications." (These specifications, however, do not contain any sort of washability requirements. The Strahan paper, however, proved to be washable.) Of the 12 samples marked on the selvage of the paper, three failed to live up to their claims for washability, and of the seven claimed by the vendor to be washable, two were not so in fact. Of the eight samples marked "fade-proof," "color-locked," "light-resisting," or "sun-tested," five showed evidence of color change after 24 hours' exposure in the Fadeometer; four other samples also failed this test, a total of nine out of 20. Only four samples passed the crocking test, but the rubbing off of color was not considered objectionable in any brand. While the factory numbers of the samples are given, it is believed that the judgments will apply to some degree to other patterns of the same mills, so that a pattern bought from a mill whose product was ranked *A* will have a high probability of excellent performance, provided paper of the same type is purchased.

Prices given in the listings are for a single roll of paper. The samples rated *A. Recommended* were found to be washable and "fade-proof" (so-called, as the term is used by the trade) within the limits of current and tentative U. S. Commercial Standards applying to wallpaper.

A. Recommended

Atlas, No. 173 WE (Atlas Wallpaper Mills, Inc., Coal City, Ill.) 36c. Medium weight. Marking: "Water-resisting." Bursting strength average. **1**

Deko No. 454, Bridesmaid's Stripe. (Decorators' Wallpaper Co., Moline, Ill.) 35c. Heavy weight. Marking: "Washable." Bursting strength above average. **1**

Sears' Colorperfect, No. 2549 (Sears, Roebuck & Co.) 24c. Heavy weight. Marking: "Washable and fade-proof." Bursting strength average. **1**

Vogue, No. 443-4 (The Prager Co., Worcester, Mass.) 42c. Medium weight. Marking: "Washable." Bursting strength somewhat below average. **1**

Birge, No. 5921, Cherry Valley (The Birge Co., Inc., 390 Niagara St., Buffalo) 85c. Medium weight. Marking: "Waterfast." Bursting strength about average. **2**

Imperial, No. 200-X, Glencraft-Wilton (Imperial Paper & Color Corp., Glens Falls, N. Y.) $1.50. Heavy weight. Marking: "Washable, color locked and guaranteed." Bursting strength average. **3**

Strahan, No. 7632 (The Thomas Strahan Co., Chelsea, Mass.) $1.50. Heavy weight. Marking as to washability, etc.: None. Bursting strength about average. **3**

B. Intermediate

Beaudry, No. 630-S (Beaudry Wall Paper Corp., Cortland, N.Y.) 37½c. Medium weight. Marking: None. Bursting strength below average. Found to be washable but not fade-proof. **1**

Enterprise, No. 800 (Enterprise Wall Paper Mfg. Co., S. Langhorne, Pa.) 37½c. Light weight. Marking: None. Bursting strength below average. Found to be washable but not fade-proof. **1**

Imperial, No. 3363 (Imperial Paper & Color Corp.) 36c. Light weight. Marking: "Washable, color locked and guaranteed." Bursting strength below average. Found to be washable but not fade-proof. **1**

United, No. B635 WEB (United Wall Paper Factories, Inc., Chicago) 42c. Medium weight. Marking: "Wall tested, sun tested, washable." Bursting strength average. Found to be washable but not fade-proof. **1**

Wards, No. W 3515 (Distrib. Montgomery Ward & Co., Chicago) 29c. Medium weight. Marking: "Washable, fade-proof." Bursting strength average. Found to be fade-proof, but washability not fully satisfactory. **1**

Designs of Today (Richard E. Thibaut, Inc., 483 10th Ave., New York City) 75c. Heavy weight. Marking: None. Bursting strength below average. Found to be washable but not fade-proof. **2**

Joliet, No. 773 WB (Joliet Wall Paper Mills, Inc., Logan Ave., Joliet, Ill.) 60c. Medium weight. Marking: "Light resisting, waterfast." Bursting strength above average. Found to be washable but not fade-proof. **2**

Niagara, No. 600 (Niagara Wall Paper Co., Inc., Niagara Falls, N.Y.) 54c. Heavy weight. Marking: None. Bursting strength above average. Fade-proof but washability not fully satisfactory. **2**

Duray, No. R-1493 (Richard E. Thibaut, Inc.) $1.25. Heavy weight. Marking: None. Bursting strength well above average. Found to be washable but not fade-proof. **3**

C. Not Recommended

Gay Bouquet, No. 264 (Distrib. Decorators' Wallpaper Co.) 25c. Light weight. Marking: None. Bursting strength low. Fade-proof. Not washable or claimed to be. **1**

United, No. 2113 (United Wall Paper Factories, Inc.) 37½c. Light weight. Marking: "Wall tested, sun tested, washable," but found neither fully fade-proof nor washable. Bursting strength below average. Failed to comply with the Commercial Standard. **1**

Eisenhart, No. 1575 WEL (J. C. Eisenhart Wall Paper Co., Hanover, Pa.) 60c. Heavy weight. Marking: None. Bursting strength well above average. Fade-proof but very definitely not washable. Background badly defaced in washing test. **2**

United, No. D473 WA (United Wall Paper Factories, Inc.) 54c. Light weight. Marking: "Wall tested, sun tested, washable," but found neither fully fade-proof nor washable. Bursting strength below average. Failed to comply with Commercial Standard. **2**

The Vitamin A Potency of Yellow Beef Fat and Beef Liver

By B. W. GARDNER, JR., UNIVERSITY OF ILLINOIS

THE WAR has forcibly directed our attention to the problems of nutrition. Vitamins have received a large share of this attention and new sources of these important food elements have been sought. A multitude of vitamin "cure-alls" have been sold by high-pressure advertising to the consuming public by promoters who promise to cure general states of ill-health and to restore flagging energy and vigor. They hint too that a host of specific troubles, from bald heads to colds, spring from vitamin deficiencies. Nutritionists, however, and qualified medical doctors still consider good food, properly prepared, the best and most economical source of vitamins, in every case except where a physician has advised special vitamin medication after definite diagnosis of some vitamin deficiency condition.

Meat is known as a chief source of the vitamins in the water-soluble B complex. For some time liver has been known to be a source of vitamin A and carotene, yet until recently very little has been done to determine the value of meat, other than glandular meat, as a source of vitamin A and carotene. As vitamin A is a fat-soluble vitamin, it would not be found in lean muscle but would be in the fat covering.

Recent experiments at the University of Illinois showed the presence of the *provitamin-A* (carotene) and a very small amount of vitamin A in white beef fat. The same experiments showed that yellow fat is more valuable from the nutritive standpoint than is white fat because it contained 14 times as much of the provitamin-A as did the white fat. The carotene (yellow coloring matter in the beef fat) content of yellow beef fat compared quite favorably with the carotene content of winter butter although it was not as high as in summer butter.

It has long been recognized that the yellower butter is (when the color is natural and not due to the dye added in commercial butter-making), the more desirable it is, from the nutritional standpoint. This is due to the higher carotene content of the naturally-yellow butter. This color advantage, however, has been working in reverse when it comes to the selection of beef fat, as white fat has been most favored. Meat grading operations have classified beef carcasses as less desirable if they contained yellow fat, regardless of their other qualities. Such procedure is obviously poor nutritional policy, and grading specifications should be revised on this point.

Such a revision is especially called for at a time when it is necessary to obtain the most efficient utilization of all the meat produced. An increasing number of pasture-fed cattle are being marketed. The fat from these cattle contains some carotene which gives it a yellow color. It is important that this meat be graded by criteria that will not discriminate against the nutritionally-valuable yellow fat. The meat from these pasture cattle, if desirable from a standpoint of quality of the lean meat, finish,[1] and conformation, should not be graded down so that the meat will be diverted into channels of highly-processed meats where the greater part of its added nutritive value will be lost. Instead it should be routed, by designation of a better grade than it would receive under the present grading criteria, so that it could be sold as fresh beef in order that its added nutritive value will be of use to the consumer who is now severely limited in availability of meat.

The experiments also showed the superior nutritive value of livers from cattle which have yellow fat. The livers from cattle which had white fat compared quite favorably in total vitamin A potency with winter butter. However, the total vitamin A potency of the livers from cattle which had yellow fat was four to five times that of summer butter (which has nearly twice as much total A potency as winter butter).

Most of the vitamin A potency of liver is provitamin-A (carotene) which is more stable in the presence of heat and air than is vitamin A itself. The opposite is true in the case of butter. Therefore, in spite of the cooking process to which liver is subjected, its total vitamin A potency, as it is eaten, should be nearly equal to that of butter and with liver from yellow-fatted cattle it would be greater than that of butter.

[1] **Editor's Note:** Finish as defined by the National Live Stock and Meat Board refers to the quality, amount, color, and distribution of fat. Its effect is primarily upon palatability and tenderness.

Lady, Do You Need A Cookbook?

By GWENDOLYN STARR

COOKBOOKS have long been the joy and sorrow of womankind. From the polite little cookbooks of the past century to the saucy titles of today, cookbooks have truly been the answer to a woman's prayer. Even modern men have invaded the field to add their culinary bit to the fire to make a better barbecue or steak. Women may be the cooks at home, but men have long reigned as chefs of the largest kitchens.

Are the days gone when recipes were exchanged as choice bits of gossip, with the secret ingredient locked snugly in the breast of the giver, so the receiver would not know all? Why tell about the last dash of paprika which makes the sauce impeccable? Remember the days when women read recipe books as eagerly as dime novels, to whet an appetite that could only be satisfied by a midnight frolic of whipping up an omelette?

Cookbooks should be practical, with such explicit and exact recipes that even an amateur will have fair success. One shudders at the amount of food wasted trying out some recipe that has appeared on the page of a cookbook, a recipe which sounded good but was never tested for accuracy! Maybe the proportion of baking powder to flour and liquid was sufficient to raise a roof. Jokes galore have been made about recipes and receipts, but they should not be the jester's delight—particularly not now with food precious, even irreplacable.

The era is also past when recipes were written with the ingredients given as "butter the size of a walnut", a "teacup of flour" and so on. No wonder the results varied from cook to cook—particularly when the directions for mixing were as clear as "mix together". The recipes written today assume that most cooks are of the amateur variety. Specifically directions are given to whip egg whites stiff and dry, or just stiffly enough, and still be moist. When did this new style of recipe writing invade the cookbooks? There was no heralding of trumpets, but gradually recipes became more accurate and specific. Even the standby recipe book, Boston Cooking School Cook Book, has changed since its early days.

> ***The Ideal Cookbook***
>
> **"BY a careful attention to the directions herein given, the most ignorant may easily learn to prepare food, not only in an agreeable and wholesome, but in an elegant and economical manner."**
>
> Dr. William Kitchiner
> in "The Cook's Oracle"

Perhaps the home economists who invaded the food companies shortly after the first World War, the departments which were sometimes organized as legitimate means of tax reduction, made their contribution. Anyway, they had to do something to warrant retention and enlargement of their departments, although it was an intangible public relations job.

In previous days, if an irate reader of a cookbook had disastrous results with a recipe, and wrote a stinging letter to the publisher or author, there was very little the reader could expect as compensation—certainly not another cookbook, the only wares the author or publisher would have to offer. There *was* a change when an irate customer wrote to a food company. Everyone from the president to the office boy would get excited and the home economist suffered the most because it was her recipe. So started the long tedious laboratory testing of recipes which had to be sure-fire. Instead of one author's dreaming up a recipe, a number of specialists took over and thoroughly examined every step until the wording was perfect and practically fool proof. Free recipes appeared, too, to offer competition to regular cookbooks. If the recipe was not successful for even an amateur, she could write her complaint to the food company and in return receive a dozen packages of the product for appeasement. No company wanted to lose good will.

Then came the era of glamorous recipes. *Gourmet* was the term which smart people applied to the new recipes—none of the ordinary fare was good enough. To differentiate their work from the explicit, laboratory type of recipe, the gourmet went in for long, descriptive paragraphs. Literally it was necessary for the cook when following such a recipe to include even the kitchen sink when concocting the new dish. Herbs and spices were revived to add to dishes which home economists had denuded of all flavor and seasoning.

Then a couple of years ago,

nutrition started its wave of popularity. Every recipe had to have a purpose. Vitamins and minerals had to ooze from every dish, as it were. Health faddists had long been heralding the merits of vegetables, emphasizing unimportant minerals. Dieting for slenderness has been another contributor to tasteless food served at home because Mother, the cook, decided to go Holiywood and the entire family had to eat her slim and slimming meals.

No wonder there was found a devastating condition of malnutrition throughout the country when the scientists and nutritionists started investigating. Not only was there a conglomeration of native eating habits from the heterogeneous group of inhabitants in our country, but families were eating on a speed shift with dad hurrying to work, the children hurrying to school, and mother spending her day at the club. Everyone ate what he or she liked, and if the entire family could sit down and peacefully enjoy one well-organized meal together, it was either Thanksgiving or Christmas. Visitors to our shores for the first time are appalled at the amount of advertising for indigestion tablets and powders, but after indulging in a few meals they too soon learn the slogan "eat fast and then take some soda."

Wartime Recipes

Today cookbooks have a real contribution to make to the war effort. With foods scarce and appetites large, the recipes of today need to take both needs into account. Less used foods of former years, such as peanuts and soybeans, are gaining new prominence. Dehydrated fruits and vegetables are receiving recognition. New flours and new mixes are making their debut. After the war, grocery stores will take on a new appearance with many different types of products. To meet this changing supply of foods and kinds of foods, cookbooks should be revised.

Although the pleasure of eating is always to be remembered when the cook plans her menu, there is no reason why the food cannot contain the necessary nutritional constituents without appearing too much like a laboratory-prepared dish. It seems that the ideal would be to have food appealing to the appetite, so that it is a pleasure to eat, and in addition take cognizance of available foods which contribute the most good to the health and vigor of the individual. Today, the purveyor of food in the home is a psychologist, nutritionist, economist plus having the undefinable asset of being a good cook. A good cook is more important today than ever before. Are any of the available cookbooks going to help? Let's examine some of them.

Classifying Cookbooks

Cookbooks may be classified in six groups as: general, specialized, regional, foreign, nutrition, and miscellaneous.

Considering each group in their order, the general type of cookbook would include the Boston Cooking-School Cook Book by Fannie Merritt Farmer; Edith Barber's Cook Book; The Joy of Cooking by Irma S. Rombauer; the American Woman's Cook Book edited by Ruth Berolzheimer; The Modern Family Cook Book by Meta Given; and many others. These books have separate chapters devoted to everything pertaining to cooking including rules on cooking, table setting, menus for every occasion, and invalid cookery. The subjects of soups, appetizers, beverages, breads, pancakes, vegetables, salads, hot and cold desserts, meat, fish, fowl, eggs, milk, ice cream, cakes, using left-overs, have a copious number of recipes in each, nothing particularly original or exciting, but containing the basic rules for preparation.

Two methods are usually followed for presenting recipes. One includes listing all the ingredients, followed by a paragraph or two of specific directions. This is helpful for the type of cook who wishes to assemble all her ingredients before attempting a cake. It is like following a chemical formula and rings with laboratory precision. Then there is the pattern which gives directions and lists ingredients as the recipe progresses. Sometimes a hint is given how the finished dish will look, or a description is appended. Or, to be a little more exasperating, a color photograph all bedecked in trimmings is included, a picture which took hours to make because even the experts had to make several cakes before a finished product achieved the perfection of appearance and "finish" for picture taking.

In this general group The Fannie Farmer Junior Cook Book should be included. Making its appearance for the first time in 1942, the recipes are slanted specifically for the young cook. (Parenthetically, why not include the *new* cook?) The illustrations are amusing, and the recipes are clearly written in detail.

The group of specialized cookbooks include such titles as Madame Prunier's Fish Cookery Book edited by Ambrose Heath and adapted for

America by Crosby Gaige; The American Wine Cook Book by Ted Hatch; those written by Jeanne Owen on Sauces and Wine Cookery; and others of this variety. In this group, books devoted to outdoor cookery could be included such as Come and Get It! by George W. Martin; and Sunset's Barbecue Cook Book which includes directions for making outdoor fireplaces, besides recipes for the cook. The advantages of specialized cookbooks are obvious because a subject can be extensively treated. For a complete library, many books from this group would make their specific contribution, although there is duplication.

At Home and Abroad

Government nutritionists and the non-traveler perhaps would not concede the point, but the United States does not have a traditional American diet and does not have standard, widely accepted rules for cooking. To the lover-of-food who travels the forty-eight states, the awareness of regional cookery is apparent. The heterogeneous grouping in the United States and the variable climate has contributed to a variety of tastes. Not only do Bostonians prefer brown eggs and New Yorkers white, but Californians eat their salads as first course, and Vermonters like pie or doughnuts for breakfast. Perhaps cooks in every state boast of their prowess at frying chicken, but it may be done in a different way in each state and still be fried chicken. Regional cookbooks are fascinating reading because they are travel books, too.

In this group are found real American cookbooks. Among them is Ruth Wakefield's Toll House Tried and True Recipes, a book filled with recipes from the famous eating place near Boston. Wisconsin has contributed The Settlement Cook Book, with an appropriate subtitle "the way to a man's heart". Between the covers are hundreds of homey recipes that have made Wisconsin famous. Another Wisconsin cookbook is The Discriminating Hostess by Ella Liner Lambert which is filled with recipes that have been home-tried and family-approved. The Yankee Cook Book by Imogene Wolcott is as New England as Boston Baked Beans. The United States Regional Cook Book edited by Ruth Berolzheimer is a collection of ten separate and complete cookbooks in one.

One of the best cookbooks, which has an old-world flavor, is The Escoffier Cook Book. Containing almost 3000 recipes, it is the Bible of Culinary Art to chefs and critical cooks. Descriptive paragraphs that can be interpreted only by an experienced cook tell how to concoct a dish. Then there is a collection of recipes from all over the world, compiled in the World Wide Cook Book by Pearl Metzelthin.

Nutrition Cookbooks

Since nutrition has become a popular word, an avalanche of nutrition books has been glutting the market. They have ranged from Eat Well for Less Money by Gaynor Maddox, a journalist and not a nutritionist, to the technical and scientific books written by emminent scientists, to the exceptionally easy to read and easy to understand America's Nutrition Primer by Eleanora Sense. Nutrition books and cookbooks can be severely criticized particularly when written by a journalist or writer who has merely done the compiling. It is this critic's opinion that a cookbook should be written by an authority who really knows how to cook, one who knows all the tricks of the trade whether she is Mrs. Smith of Keokuk, Iowa, or a "degreed" scientist. So should a nutrition book be written by a nutritionist who knows how to interpret very technical and scientific information into practical everyday meals and recipes.

The concluding group includes the story-type recipe books. Examples are the books written by the late Della Lutes, such as The Country Kitchen, and the recently published book, Stina—The Story of a Cook, by Herman Smith. Nostalgic of old kitchens and familiar odors, this type of book is easy reading, and it is not imperative to try the recipes, although they usually are manna from heaven.

What are other recommendations for an ideal cookbook? First of all the pages should lie flat. Secondly, a recipe should be clearly written and completely written without a cross reference to another recipe on some other page of the book. The step-by-step process pattern of writing a recipe is clearer and easier to follow, although the ingredients should be listed, too, for quick checking. In the directions enough description should be included so the follower of the recipe will have a good idea of what to expect.

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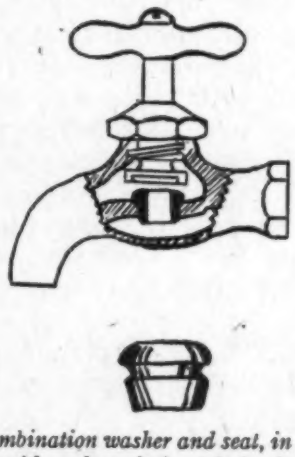
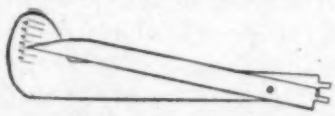
New Repair Gadget for Leaky Water Faucets

LEAKY faucets are not only annoying, but they waste considerable water and often result in unsightly rust stains, which are difficult to remove, on the porcelain finish of lavatory basins or bathtubs. When the hot-water faucets leak, not only a waste of water is involved, but a waste of the fuel used to heat the water.

New faucet-washers are easily installed, and every householder should learn how to make this simple repair, which should be carried out as soon as dripping begins to occur. When the seat of the valve has been damaged either by long use or long continuance of a leak, installation of a new washer does not effectively solve the problem, the washer being quickly "chewed up" by the rough surfaces of the seat against which it is pressed when the faucet is shut off tight. Under these circumstances, the metal seat in the faucet requires resurfacing by a plumber, who has a special tool for this purpose.



Combination washer and seat, in position; with enlarged view of slat itself.



Tool for measuring and inserting "No-Leak" seat.

This rather troublesome reseating job can now be avoided. With the new accessory, the customary washer and screw carried on the part that moves with the faucet handle are no longer used, their function being replaced by that of a composition ring carried on a sleeve inserted into the faucet seat hole. This device has been found in a number of actual trials over a period of a year to give satisfactory results.

About the only apparent disadvantage of the new accessory is—and in most households this is a minor matter—that it reduces the size of the opening in the faucet through which water flows. Where city water pressure is high, this may be helpful rather than otherwise.

A. Recommended

No-Leak Faucet Repair Set (Keystone Brass & Rubber Co., Philadelphia; distributed by Stuart-Marshall Sales Co., Inc., 11 W. 42 St., New York City) $1.25 for 10 assorted sizes of composition seats with special measuring caliper. Extra seats of any size available at $1 for 10.

Simple Alarm Systems for the Home—II

THERE ARE two general principles upon which an electric-alarm system can work: one known as the open-circuit, the other as the closed-circuit principle. In the first system, the electrical circuit is not normally complete, so that no current can flow under normal conditions and there is no drain on the battery or other source of energy. When the event occurs which the alarm is designed to announce, a contact is made, the circuit is completed, current flows, and an alarm sounds or lights are lighted. In the second, or closed-circuit system, some current flows continuously, the occurrence of the abnormal event **opens** the circuit, interrupts the current, and thus causes the alarm to sound. Either of these systems can be applied to the problem of guarding against fire, or announcing unauthorized opening of a door or window or entry into a building or area. Either alarm system involves use of some sort of sensitive or responsive device at the point where fire or unauthorized entry is to be detected —hereafter referred to as a detection or station device. Since the open-circuit system is prone to be unreliable **because no warning is given upon failure of any part,** only closed-circuit systems are regarded as safe and sure in their action.

The Closed-Circuit System

In the closed-circuit type of alarm system, the detection devices are all connected in "series" so that there is a continuous circuit so long as all the points of contact remain in contact. If any single detection device fails to make contact, either because of defective operation or interference by an unauthorized person, or **if the current supply fails,** then the alarm is sounded. In a properly wired system, if the alarm gong and its batteries are kept in good condition, only short-circuiting or "bridging" of a detector station device can result in failure to sound the alarm. Such short-circuiting would occur very rarely indeed except by intentional tampering, but its possibility does suggest that even with a closed-circuit system, regular inspection is required to be sure that some element in the system has not in some way been rendered inoperative.

In a correctly designed system, if the circuit is only momentarily broken—for the fraction of a second—the alarm condition will persist and the lights or gong will continue to herald the alarm until some authorized person restores the alarm system to normal. The alarm should also be arranged so that it can be rendered inoperative in certain periods when its use is not needed, by a simple manipulation within the main control box, which can, if desired, be kept under lock and key.

THE first article on alarm systems, which lists sources of supply for parts, appeared in the March 1943 BULLETIN.

In this second article, description and diagrams are given by which a handy man familiar with simple electrical wiring can set up a workable alarm circuit to guard the house, chicken coop, or barn during the owner's absence from the property. Farmers and people living in isolated country or suburban homes will be especially interested in the possibilities of an alarm that will announce, by gong or buzzer in the home of a neighbor, relative, or friend living nearby, the unauthorized opening of a door or window in an unguarded or temporarily unoccupied house or office.

Any type of circuit-breaking detector device may be connected to the closed-circuit system herein described (see Fig. 1, p. 22). The main control box containing the alarm gong and its dry cells (or storage battery and a small storage battery charging unit if the system is a large or important one) should be located where it can always be under observation. In the home, this may be the owner's bedchamber (if the alarm gong is operated by dry batteries); in an industrial plant, the plant superintendent's office or chief watchman's station. The main switch and control relay may be placed, if desired, in a locked metal box such as a large "cutout box" which electrical supply dealers offer for use of electricians doing house wiring. The closed circuit to the detector devices carries only the current required to energize the control relay and its pilot light. (The current passing through the contacts of the detector devices is therefore small and no trouble should be encountered on account of the contact erosion or arcing that sometimes renders electrical contacts unreliable.)

Figure 1 shows a closed-circuit system suitable for operation from the usual 110- to 120-volt alternating current house wiring, with the series detector-station circuit powered by a 6-volt bell-ringing transformer. (If only direct current is available, a 6-volt storage battery must be used as a power source in place of the transformer; dry cells cannot be used in this part of a closed-circuit system.) The relay is of the type known technically as "double pole, double throw", and is wound for operation on 6 volts alternating current (a. c.) (6 volts direct current if for storage battery operation). The push button, f in Fig. 1, is of the momentary contact (doorbell) type. The pilot light, g of Fig. 1, may be any small 6- to 8-volt bulb calling for a minimum of current. The low-voltage series detector-station circuit (running to detector devices at h) may be wired

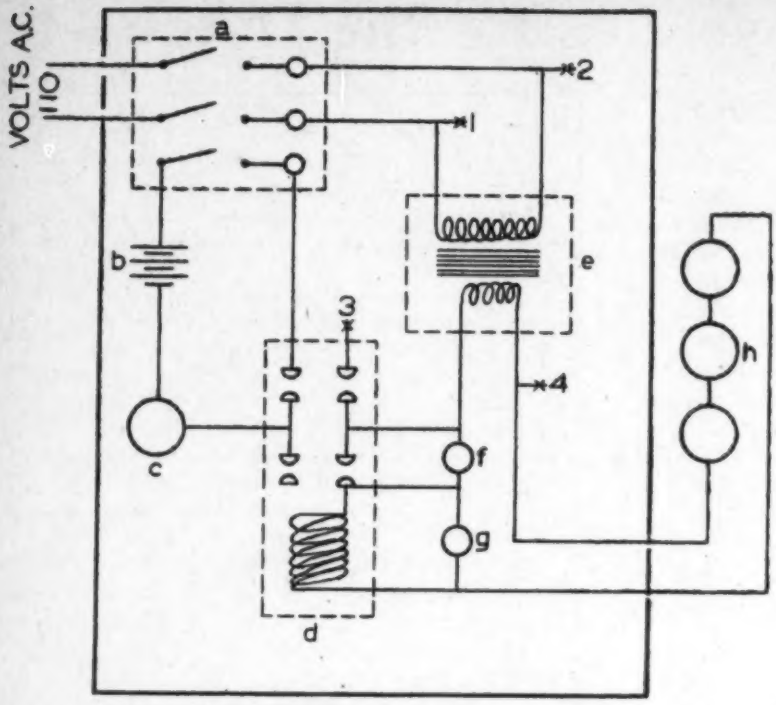


Fig. 1—Closed-circuit alarm system.

a—Main switch. b—Battery for alarm gong. c—Alarm gong. d—Control relay. e—Bell-ringing transformer, reducing 110 volts to 6 volts (alternating current). f—Push button. g—Pilot light. h—Detector-station circuit with three detector-station devices.

Points marked 1, 2, 3, and 4 are for the connection, when desired, of an additional alarm or accessory circuit as shown in Fig. 2.

with wire of suitable gauge, having insulation of moistureproof type—"bell wire" may suffice.

With the three-pole main switch in the "off" position, no current flows in either the alarm gong or the transformer circuits, and the armature of the control relay is in the "up" position, with the corresponding contacts closed. When the switch is thrown "on," therefore, the alarm circuit is completed and the alarm, c in Fig. 1, rings. Now if the detector-station circuit is in closed (normal) condition, a momentary depression of the push button closes the circuit through the field coil of the control relay, and the armature is drawn down, breaking the alarm circuit and closing the lower set of contacts. The field coil of the relay therefore remains activated, and the armature remains in the "down" position until the station circuit is opened, or the power fails. When either event happens, the relay armature rises and energizes the alarm circuit; the alarm can be shut off only by again pressing the push button after restoring contact at the detector stations, or by opening the main switch shown in Figure 1. If the power is off, the alarm can be shut off only by opening the main switch a. Failure of the control relay to close and remain closed when the push button is pressed and released indicates that a detector-station circuit is open or that there has been an interruption in the power supply.

There are obvious elaborations in the system just described that will occur to anyone, for in addition to the battery-operated alarm gong or lighting circuits used to sound the alarm or frighten away an intruder, there may be connections to signal the owner's house, a neighbor's dwelling or other building nearby, or to turn on lights in the building or outdoors. Arrangements may be simply made by which the power for such accessory equipment is taken from the regular power wiring of the house or building. Figure 2 shows a circuit which may be connected to the circuit of Figure 1 for the purpose of operating such accessory equipment.

Detector-Station Devices

A simple fire-alarm station device can be made from a strip of thermostatic 2-metal strip (commonly called bi-metal—a simple device which becomes bent or straightens out as temperature changes), which may be obtained at some big-city hardware stores. Suitable bi-metal strips (about 3 in. long by $\frac{3}{8}$ in. wide) are at present available from Blan the Radio Man, Inc., 64 Dey, New York City, priced at about 15c to 25c each, depending upon the quantity ordered. For one, send 25c, and an addressed stamped envelope. The strip is to be fixed firmly at one end, with its free end against a contact point, which may be the end of a brass screw (see Fig. 3). By adjusting the screw, its pressure against the free end of the bi-metal may be made such that the contact will be interrupted and the circuit opened at the desired temperature. The device is connected into the detector-station circuit by fastening one wire to the screw and another to the fixed end of the bi-metal (points 5 and 6 in Fig. 3). This simple thermostat may be fastened to a flat board of well-seasoned wood, preferably varnished or shellacked and reinforced to prevent warping. Mount each component on one of the small stand-off insulators sold at radio stores, or other suitable support. To adjust the thermostat, the bulb of a thermometer is placed near the bi-metal strip, and the temperature is raised (not too rapidly) by holding an electric iron, for example, under the thermostat. When the thermometer indicates the temperature at which it is desired to have the alarm sound, the screw is adjusted until the contacting surfaces of the screw and the strip just fail

to make contact. The thermostat is then allowed to cool, and is reheated to check the setting. A temperature of 135°F is often used, but a considerable variation from this figure would do no harm in most practical cases. The location of the thermostat is governed by conditions, but is usually near the ceiling of a room (especially a room containing a possible fire hazard, due to a chimney or electrical equipment, and not frequently visited) or near any heating device considered a possible fire hazard. Commercial thermostats operating on this principle are available, but are expensive.

For protection the complete detector unit may be placed in a box, boring enough holes in the box to permit the necessary circulation of air to provide for prompt communication of the temperature of the surrounding air to the thermostat. Over each hole a disc of fine mesh screen wire may be placed to prevent entrance of wasps, bees, mice and other small animals that might interfere with the electrical arrangements. (But the screens must not be permitted to become clogged with spider webs and dust.)

Other simple devices for fire detection can be made from the fusible links used with fire doors or in the oil shutoff lines of oil burners; they fuse at about 165°F and can be purchased from some dealers for about 15c each. One end of a link is fastened rigidly to a stand-off insulator, and the other fastened, under tension of a spring, to another insulator. Connecting wires for connecting the detector-station circuit go to the two ends of the fusible link.

Burglar Detection Devices

The simplest burglar-alarm devices consist of contacts on doors or windows and their respective casings; these may be simply made by using two thin strips (about 1/32 to 1/16" thick) of springy brass that are deflected 1/4 inch or so when the window is fully closed. As long as the door or window remains closed, the station circuit is complete, but if opened, the circuit is broken, and the alarm sounds. To provide temporary protection to a space which may be entered, a black thread may be fastened to one of two contacts which are normally held together by light spring pressure. The thread is stretched across any space where an intruder may be expected; a light pressure on the thread momentarily breaks the contact, sets the relay to its "up," or "gong-ringing" position, and gives the alarm.

We again remind the reader that all types of alarm systems may occasionally give an alarm when there is no evident cause for one; a contact may fail or a wire become disconnected, or a prowling cat may disturb something. If the system is carefully installed, however, such cases should occur only rarely, except where there are

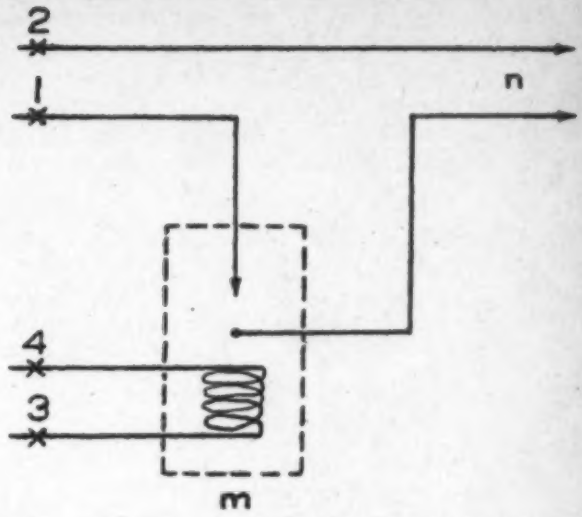


Fig. 2—Auxiliary circuit for operation of accessory equipment on 110 volts, from circuit shown in Fig. 1. Points 1, 2, 3, and 4 are connected to the corresponding points in Fig. 1, if this circuit is used.

m—Relay having single-pole, single-throw contacts, and 6-volt (alternating current) field coil. n—Line delivering alternating current at 110 volts for operation of lights, or other signal or accessory equipment as mentioned in text.

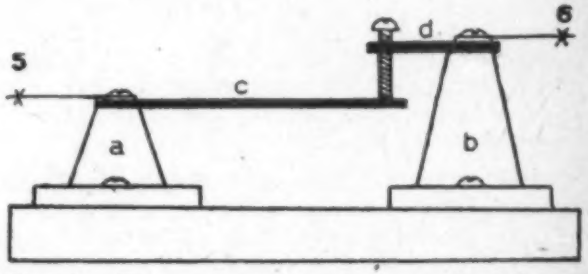


Fig. 3— Detector-station device—fire-alarm type.

a—Insulating support—may be 5/8-in. stand-off insulator. b—Insulating support—may be 1-in. stand-off insulator. c—Bi-metal strip. d—Brass strip, threaded, or having nut soldered to it, to carry brass adjusting screw. d should be short and stiff.

Points 5 and 6 are connected into the series detector station circuit represented by h in Fig. 1.

power failures or interruptions (as there often are on some country and small town electric lines).

It may be noted that the photo-cell alarm system described in the first article may be connected to operate with the system which has been described in this article. The upper and middle terminals of relay marked d in the photo-cell alarm diagram on page 25 of the March BULLETIN can be connected in place of any of the detector stations "h" shown in Fig. 1 of the pres-

ent article, so that when the relay contacts are opened due to momentary interruption of light falling on the photo-cell, the alarm is given by the action of relay "d" just as it would be by the interruption of the circuit through the action of one of the metallic contact detector units "h."

* * *

Additional source of lenses suitable for the photo-cell burglar alarm unit previously described:

Edmund Salvage Co., 41 W. Clinton Ave., P. O. Audubon, N. J. (Lenses of the specified focal length priced at 20c to 30c.)

Manufacturers of thermostats and thermostatic fire detectors:

Central Scientific Co., 1700 Irving Park Road, Chicago. (Adjustable thermostat at $2.50.)

G-M Laboratories, Inc., 4314-26 Knox Ave., Chicago. (No. 1905C *Detect-A-Fire* Unit, closed-circuit model, at $1.89.)

Suppliers of fusible links:

Metro Supply Co., Henderson St., Everett, Mass

Globe Automatic Sprinkler Co., 2035 Washington Ave., Philadelphia.

Grinnell Co., 29-50 Northern Blvd., Long Island City, N.Y.

SOME WIRE suitable for the alarm circuits, it is believed, can still be gotten in lengths from 25 to 100 feet (mill remnants) from Bergwald Material Co., 359 Canal St., N.Y.C., priced around ½c a foot. If conditions are exceptionally damp or wet, advise supplier so that proper selection of wire can be made, if possible.

OF COMPLETE (PLUG-IN) PHOTO-CELL ALARM DEVICES, Montgomery Ward may still have a few remaining in stock, priced at $26.90. (Useful in turning off house or store lights during a blackout, in owner's absence.)

The Septic Tank System of Sewage Disposal

UNDER wartime conditions, everything connected with the plumbing system of the home should be maintained with special care, for replacements in many cases will be difficult or impossible, and even labor for ordinary repairs or cleaning will often be most difficult to secure. For this reason, many readers will be interested in the following brief discussion of the septic tank, and precautions important in using a septic-tank disposal system to avoid any breakdown or an interruption in the continuity of the service it provides.

Most authorities are agreed that the septic tank, connected to an underground absorption system, is the most practical way of disposing of liquid wastes from country homes or camps. Those considering the problem for the first time, will find very helpful a pamphlet entitled, The Septic Tank System for Home Sewage Disposal, issued 1940 by the Kansas State Board of Health and available free of charge from the Secretary of the State Board of Health, Topeka, Kansas.

The pamphlet points out that the septic tank, if large enough, will not require cleaning for several years. The sewer line connecting the cast-iron soil pipe (which should extend outside the foundation of the house) with the septic tank should be a four- or six-inch glazed sewer tile laid with the bell ends up-slope, and with well-cemented joints. The length of the drain tile line depends on the composition of the soil and the amount of sewage to be disposed of daily. A sandy soil, for example, will dispose easily of more septic tank drainage liquid than a heavy, clayey, tight, or waterlogged soil. When the number of persons served by a disposal plant exceeds ten or when the septic tank flow is greater than 500 gallons a day, it is important to apply the sewage to the irrigation field by an intermittent system that permits time for the liquid to soak into the ground between periods of flow. Such a system often uses a siphon and a dosing tank.

Detailed information is given to help determine the best location of the septic tank, with diagrams for the proper placing of the tile drainage system. Very important for city dwellers, who are used to a public sewer system into which—in the estimation of some people—you can dispose of anything with the possible exception of tin cans, is the section on care and maintenance of septic tank systems.

In brief, the points made are:

(1) Use only standard toilet paper, and never dispose of sanitary napkins, newspapers, rags, sticks, or garbage in the sewer system using a septic tank. (If your kitchen sink is equipped with one of the new-fangled garbage grinders and shredders discharging into the sewage disposal system, the liquid capacity of the septic tank will need to be double that required when garbage is not disposed of through such a device.)

(2) Avoid pouring grease into any plumbing fixture, since the lines are likely to clog, and, furthermore, large quantities of grease in the septic tank interfere with its operation.

(3) Do not discharge chemicals or disinfectants into the septic tank, since they will interfere with the bacterial action and cause the tile drainage-field to clog much more rapidly.

(4) Roof drains should not be connected to the septic tank.

(5) Inspect the tank every two or three years to ascertain whether the sludge exceeds 12 inches in depth. When it does, the tank should be cleaned.

(6) Clean grease traps periodically.

Off the Editor's Chest

[*Continued from page 2*]

But there is no need, and none can be shown, for tearing a delicately-interlinked and finely functioning manufacturing and distributing economy to bits at the whim or behest of any of Leon Henderson's leftish economists or Donald Nelson's "industrial experts," so called. For these men the temptation to "direct" or "reorient" what they call "capitalist production," has often proved too great to resist; the sense of power in pushing a hundred or a thousand manufacturers out of business by mere issuance in legal form of a mimeographed "directive" or ukase apparently gives such men the same sort of satisfaction as the average businessman or engineer feels in building a business enterprise, . . . and making it run and turn out useful and needed products. It is important for every citizen and taxpayer to understand clearly this characteristic of many a governmental executive, who can say quite calmly: "It's just too bad, but we don't need your product any more, so you may close down." . . .Civilian welfare, incentive, and ability to carry on are going to need. . .a minimum of zeal for reform or remaking society in wartime if the war effort is to go forward effectively. . . .—*December 1942, p. 2 and 24.*

Such ill-conceived planning as tries to stop manufacture and trade in nearly everything but munitions can bring about a wide-spread breakdown on the home front, the second line of the Nation's defenses, which must operate steadily and productively also, behind the armed forces.—*December 1942, p. 2.*

Some hints have been dropped lately by high government officials that there might be some resumption of the manufacture of consumers' goods, on which production was hastily and most unwisely suspended in an effort to turn out munitions of war faster than they can be shipped to where they can be used. The difficulty seems to be that, first of all, no one in the government service can ever devise a practicable formula for doing a right-about face on a major matter of policy and admit grave errors of calculation or judgment; nor, secondly, can he decide how much production to permit of what articles. . . . The situation of those in charge of our civilian economy is all the more difficult because the businessmen who might presumably be expected to know something of the problem of supplying civilians with needed articles have been smeared for "wanting to do business as usual" (meaning that they wanted to go on earning a living so they could serve the needs of their communities—and *pay* their taxes rather than default on them). They have been informed in unmistakable and frequently insulting terms that they might know how to manufacture things, but their "point of view" was unsuited to the problems of the war emergency. Like the farmer they may perhaps be pardoned for deciding to stay put as well as they can until the consumers in this country make it plain that they are to be supplied with the things needed to keep the home front going until the boys in the armed forces return.—*May 1943, p. 25.*

We do refer to those shortages which result from lack of knowledge, ability, or experience in management of governmental agencies and officials, who are so numerous that, Most businessmen today are slowly going nuts trying to cope with the baffling rat-race which such confused lines of authority have engendered.—*From editorial in Air Conditioning and Refrigeration News, June 21, 1943.*

I have charged, and I do not withdraw the charge, that there have been men in the executive bureaus, such as the O.P.A., and the W.P.B., who have deliberately wanted to change our form of government, and who sought to use the war powers to bring about that objective. I know that there have been persons in various bureaus who have believed that the time has come when little business can be liquidated, when individual enterprise can be liquidated, and all those things accomplished.—*From a speech of Senator Joseph C. O'Mahoney of Wyoming in the Senate, Congressional Record, June 25, 1943.*

No one can deny that all these attempts at price fixing and regimentation. . .are illegal, dangerous to the economy, and will be overthrown in a revolt of agriculture and its allied interests.—*Philip R. O'Brien, President, Chicago Board of Trade, Jan. 18, 1943.*

Of prime interest to industry was the Nelson announcement that some banished civilian output might be resumed in "hard goods." Cancellation of certain war contracts because munitions production has run beyond any reasonable needs coincides with the admission of the Army Chief of Ordnance that the current supply is ample. . . .Unless the country is to drown in a sea of undelivered munitions the move now under way in the War Production Board, as announced by Chairman Nelson in the week, to ease up on the civilian economy seemed a logical one to business observers. Major General Levin H. Campbell, Chief of Ordnance, admitted that manufacture of ordnance was far ahead of production of ships to transport it.—*From "The Merchant's Point of View," column by C. F. Hughes, business page editor, The N.Y. Times, March 21, 1943.*

By the end of 1943, unless drastic measures are promptly taken, we face a break-down on the home front. . . .We must once and for all do away with the theory that after military needs are met, the civilian population should scramble for the crumbs that are left over. . .that a total war can be waged by planning the production of airplanes and ships and neglecting the production and distribution of the food, clothing, fuel, . . . and other necessities used by those who make the airplanes and ships.—*From a speech of Senator Francis T. Maloney of Connecticut in the Senate, Cong. Record, March 16, 1943.*

I do not think it is a sound war-policy for the commander-in-chief to risk the collapse of the home front while winning the purely military campaigns of war. . . .a collapse on the home front can jeopardize the most successful military operations.—*Jay Franklin [John Franklin Carter], prominent pro-administration writer and columnist, in Bridgeport Herald, July 4, 1943.*

far from furthering the supply of goods, they get in each other's and consumers' way with their endless orders and directives and contradictions in and reversals of policy. They are in fair way to bring the whole system of providing goods and services for civilians to a grinding, creaking stop. . . .—*March 1943, p. 20.*

. . . the confusion in the policies of those who have accepted the responsibility for seeing that the American consumers get enough to eat is instanced by the pressure-canner situation. . . . An inquiry to a number of canner manufacturers revealed the fact that the order had not come through to them as yet, and *that if it was not received very shortly, it would be too late to get into production for distribution for the current canning year.* . . . government officials. . . have said that such methods [without use of the pressure canner] are unsafe and hazardous for many types of vegetables and for meats and fish.—*April 1943, p. 25 and 26.*

There must be millions who have been puzzled by the sudden shortage in our meat supply when there have been reports on the one hand of the highest production of meat animals in history . . . .—*July 1943, p. 31.*

Food-control officials will be well advised to read up on their dietary history and find ways of *increasing meat production and facilitating its distribution*, rather than evolving a costly and wasteful national propaganda campaign for the elimination of meat from the American diet.—*July 1943, p. 31.*

The working American, too, should be critical of any governmental leadership which constantly falls back on the superficially easy method of dividing up the readily available supplies as a satisfactory or permanent solution for any problem, for the spirit which has made America the arsenal and supply source of the anti-Axis world has been one that put drive and fast movement into production and distribution and was always restive under restrictive controls.—*October 1942, p. 10.*

If civilians really are entitled to the necessities of daily living . . . let's get rid of the multitudinous alphabet agencies that are nominally in charge of supplying civilian needs. . . .—*March 1943, p. 20.*

. . . the people in this country are going . . . to acquire a healthy respect for the system of "private enterprise" which used to do pretty well at the job of supplying them with food and other necessities at the time and place where they were wanted.—*May 1943, p. 25.*

. . . too many in charge of civilian supply in the OPA and WPB are just college professors. . . [with] an outlook that is hopelessly theoretical and completely out of touch with the practical realities of the commodity situations they were given power over.—*January 1943, p. 13.*

Government spokesmen have developed no clear policies to integrate the various agencies dealing with economic stabilization. Policy makers have substituted slogans for actions . . . We have proceeded in this field by groping, tentative steps, by hemming and hawing, by halfway measures . . . while competing agencies without constructive programs wrangle for control. . . . The very agencies needed to control and direct the war economy are disintegrating.—*Report by U.S. Senate's Special Subcommittee on War Mobilization, June, 1943.*

. . . New York City received yesterday additional carloads of new potatoes from the South that had rotted in transit. The shipments had been made without refrigeration in accordance with a recent order of the Interstate Commerce Commission [approved by the Office of Defense Transportation]. . . .[A food distribution official] estimated last Saturday that some sixty carloads, or about $90,000 worth, had spoiled.—*From news item in The N. Y. Times, June 16, 1943.*

Commissioner Woolley [Markets Commissioner Daniel P. Woolley of New York City] said that while this shortage exists in the city, cattle ranges are overstocked. The cattlemen want to sell their beef and the consumers want to buy beef, he said, but both groups are frustrated because "the normal trade channels are choked at the bottleneck of the packing houses and slaughterers because of OPA regulations."—*The N. Y. Times, July 8, 1943.*

. . . the nation's farmers, cattlemen . . . and many a public official had but one point of blame: a fantastically mixed-up Government food policy, pulled and hauled among nine agencies.—*Time, June 28, 1943.*

The Office of Price Administration, Goss said, is interested only in holding down prices and not in increasing production. For this reason, he said, OPA control over food prices should be transferred to the War Food Administration. "Had we deliberately set out to create a food problem, we could scarcely have done more than has been done," Goss continued.—*Albert S. Goss, Master of the National Grange, in testimony before the Senate Agriculture Committee, reported in Washington Times Herald, June 8, 1943.*

We do not need more government agencies—we need less. We need less in time of war as well as in time of peace. . . . there would have been less wear and tear in this transition if there had not been so much effort diverted to the establishment of government intermediary agencies of all sorts in production and distribution enterprises. . . . the accomplishments of these agencies were offset in large measure by the confusion and uncertainties they inflicted on private initiative. . . . We are fighting this war because most of us believe that we can do more for ourselves under free enterprise—with all its admitted shortcomings—than totalitarian systems can do for us. Let's have done with this fallacy that government can compete with its citizens and be partners with them and not inevitably evolve the very thing we fight to prevent.—*Editorial in the magazine Eastern States Cooperator, July 1943.*

. . . Lawyers are telling the farmers what to do; professors are dictating to production experts; those who have failed in private life are pulling the key strings in public positions; theorists and star-gazers are slowing down the productivity and progress of hard-headed and realistic businessmen.—*From remarks of Congressman Karl E. Mundt of S. Dak., Cong. Record, July 6, 1943.*

Ratings of Motion Pictures

This section aims to give critical consumers a digest of opinion from a number of reviews, ranging from the motion picture trade press to Parents' Magazine, which rates motion pictures not only on their quality as entertainment but on their suitability in various aspects for children.

It should be emphasized that the motion picture ratings which follow do not represent the judgment of a single person but are based on an analysis of the reviews appearing in some 20 different periodicals. The sources of the reviews are:

Box Office, Chicago Daily Tribune, The Christian Century, Cue, Daily News (N.Y.), *The Exhibitor, Harrison's Reports, Liberty, Mademoiselle, Motion Picture Herald, Motion Picture Reviews* (The Women's University Club of Los Angeles), *National Legion of Decency List, Newsweek, New York Herald Tribune, New York Times, Parents' Magazine, Release of the D.A.R. Preview Committee, Successful Farming, Time, Variety* (weekly).

The figures preceding the title of the picture indicate the number of critics who have been judged to rate the film A (recommended), B (intermediate), and C (not recommended).

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure
biog—biography
car—cartoon
com—comedy
cri—crime and capture of criminals
doc—documentary
dr—drama
fan—fantasy
hist—founded on historical incident
mel—melodrama
mus—musical
mys—mystery
nov—dramatization of a novel
rom—romance
soc—social-problem drama
trav—travelogue
war—dealing with the lives of people in wartime
wes—western

A	B	C		
—	4	2	**Above Suspicion**	*war-com A*
—	7	2	**Action in the North Atlantic**	*war-dr A*
—	5	2	**Aerial Gunner**	*war-mel AYC*
—	1	7	**After Midnight with Boston Blackie**	*cri-mel A*
13	5	—	**Air Force**	*war-mel A*
—	5	6	**Air Raid Wardens**	*com AYC*
—	2	3	**Alaska Highway**	*mel AY*
—	4	1	**Alibi**	*mys-mel A*
—	2	4	**All by Myself**	*mus-com A*
1	7	6	**Amazing Mrs. Holiday, The**	*war-mus-dr AYC*
1	8	2	**American Empire**	*wes-dr AY*
—	9	4	**Andy Hardy's Double Life**	*com AYC*
—	2	5	**Ape Man, The**	*mel A*
1	10	2	**Arabian Nights**	*mel A*
2	9	2	**Assignment in Brittany**	*war-mel AYC*
—	8	1	**At Dawn We Die**	*war-mel AY*
—	2	1	**Avenging Rider, The**	*wes AYC*
—	4	3	**Background to Danger**	*war-mel AYC*
3	7	3	**Bataan**	*war-tr A*
1	4	3	**Behind Prison Walls**	*cri-com A*
—	2	6	**Behind the Eight Ball**	*mys-mus-com A*
—	7	2	**Best Foot Forward**	*mus-com A*
—	3	2	**Billy the Kid in Western Cyclone**	*wes AYC*
—	1	6	**Black Raven, The**	*cri-mys AYC*
2	7	4	**Bombardier**	*war-dr AYC*
—	3	5	**Boogieman Will Get You, The**	*com AYC*
—	5	1	**Border Patrol**	*wes AYC*
—	2	4	**Boy from Stalingrad, The**	*war-dr A*
1	3	—	**Buckskin Frontier**	*wes AYC*
2	9	4	**Cabin in the Sky (all negro)**	*mus-com A*
—	1	3	**Calaboose**	*cri-com AY*
—	1	3	**Calling Wild Bill Elliott**	*wes AYC*
—	5	4	**Captive Wild Woman**	*mel A*
—	3	1	**Carson City Cyclone**	*wes AYC*
—	5	3	**Chatterbox**	*mus-com AYC*
2	11	1	**Chetniks**	*war-mel AYC*
1	9	4	**China**	*war-mel A*
—	4	8	**China Girl**	*war-mel A*
—	3	6	**City Without Men**	*war-mel A*
—	2	5	**Clancy Street Boys**	*cri-com AYC*
1	3	—	**Colt Comrades**	*wes AYC*
2	8	4	**Coney Island**	*mus-com A*
1	3	—	**Constant Nymph, The**	*dr A*
—	5	4	**Corregidor**	*war-dr A*
—	1	3	**Cosmo Jones in the Crime Smasher**	*mel AYC*
—	1	2	**Cowboy Commandos**	*war-wes AYC*
—	5	2	**Cowboy in Manhattan**	*mus-wes AYC*
3	10	1	**Crash Dive**	*war-mel AY*
—	3	3	**Crime Doctor, The**	*cri-dr AYC*
—	8	6	**Crystal Ball, The**	*com A*
—	3	—	**Dawn on the Great Divide**	*wes AY*
—	3	3	**Days of Old Cheyenne**	*wes AYC*
—	4	3	**Dead Men Walk**	*mys-mel A*
—	2	2	**Dead Men's Gulch**	*wes AYC*
7	1	—	**Desert Victory**	*war-doc AY*
1	11	2	**Desperados, The**	*wes AYC*
—	9	1	**Dixie**	*mus-com A*
—	1	9	**Dixie Dugan**	*war-com AYC*
1	2	2	**Dr. Gillespie's Criminal Case**	*mel A*
—	7	2	**Dr. Gillespie's New Assistant**	*dr A*
1	2	7	**DuBarry Was a Lady**	*mus-com A*
4	7	2	**Edge of Darkness**	*war-dr A*
—	3	6	**Eyes of the Underworld**	*cri-mel A*
—	8	4	**Falcon Strikes Back, The**	*cri-mel A*
—	6	3	**Fall In**	*war-com AYC*
—	1	2	**False Faces**	*cri-mys AYC*
—	2	1	**Fighting Sea Monsters**	*doc AYC*
1	10	1	**Five Graves to Cairo**	*war-mel A*
—	10	6	**Flight for Freedom**	*war-dr A*
—	5	2	**Follow the Band**	*mus-com A*
1	12	2	**Footlight Serenade**	*mus-com A*
2	10	—	**Forever and a Day**	*war-dr AYC*
1	3	1	**For Whom the Bell Tolls**	*war-dr A*
—	8	5	**Frankenstein Meets the Wolf Man**	*mys-mel A*
—	3	—	**Frontier Fury**	*wes AY*
—	2	3	**Gentle Gangster, A**	*cri-mel AYC*
—	4	2	**Get Going**	*mus-com AYC*
—	3	2	**Ghost and the Guest, The**	*mys-com AYC*
—	2	1	**Ghost Rider, The**	*wes AYC*
—	1	4	**Ghosts on the Loose**	*war-com AYC*
—	1	9	**Gildersleeve's Bad Day**	*cri-com AYC*
—	2	4	**Girls in Chains**	*soc-mel A*
—	1	4	**Good Morning, Judge**	*mus-com A*
—	4	3	**Gorilla Man, The**	*war-mel A*
—	3	5	**Great Impersonation, The**	*war-mel A*
—	2	1	**Guadalajara**	*mus-com A*
—	1	2	**Gyandev of India**	*biog AY*
2	9	2	**Hangmen Also Die**	*war-dr A*
—	14	3	**Happy Go Lucky**	*mus-com A*
2	3	2	**Harrigan's Kid**	*mel AYC*
—	8	4	**He Hired the Boss**	*cri-com AYC*
—	7	4	**He's My Guy**	*mus-com A*
—	7	2	**Heart of a Nation, The**	*war-mel A*
—	12	3	**Hello, Frisco, Hello**	*mus-com A*
1	6	2	**Henry Aldrich Gets Glamour**	*com AYC*
—	3	2	**Henry Aldrich Swings It**	*mus-com AYC*
—	6	2	**Hi, Buddy**	*mel AYC*
—	5	2	**High Explosive**	*mel A*
2	7	2	**Hit Parade of 1943**	*mus-com A*
1	5	—	**Hit the Ice**	*mus-com AYC*
1	9	4	**Hitler's Children**	*war-dr A*

A	B	C		
—	2	3	**Hitler's Hangman**	*war-dr A*
—	4	7	**Hi 'Ya Chum**	*mus-com AYC*
—	4	2	**Hoppy Serves a Writ**	*wes AYC*
—	5	—	**I Escaped from the Gestapo**	*war-mel A*
—	7	6	**I Walked with a Zombie**	*mys-mel A*
—	9	2	**Ice-Capades**	*mus-com AYC*
2	4	—	**Idaho**	*mus-wes AYC*
2	11	5	**Immortal Sergeant, The**	*war-dr AY*
14	3	—	**In Which We Serve**	*war-dr A*
—	7	8	**It Ain't Hay**	*com AYC*
—	9	3	**It Comes Up Love**	*mus-com AYC*
—	5	4	**It's a Great Life**	*com AYC*
—	6	3	**Jacaré**	*animal AYC*
—	4	4	**Jitterbugs**	*mus-cri-com A*
—	6	2	**Johnny Doughboy**	*mus-com AY*
2	11	2	**Journey for Margaret**	*war-dr A*
—	3	3	**Junior Army**	*dr AYC*
—	4	—	**Kansan, The**	*wes AYC*
—	1	6	**Keep 'Em Slugging**	*cri-mel AYC*
—	3	4	**Kid Dynamite**	*cri-mel AYC*
1	4	—	**King of the Cowboys**	*war-mus-wes AYC*
—	3	7	**Ladies' Day**	*com A*
—	5	4	**Lady Bodyguard**	*mel A*
—	5	2	**Lady from Chungking**	*war-dr A*
—	10	6	**Lady of Burlesque**	*cri-com A*
—	2	2	**Last Will of Dr. Mabuse, The**	*war-mel A*
—	2	2	**Laugh Your Blues Away**	*com AYC*
—	4	1	**Law of the Northwest**	*mel AYC*
—	3	1	**Leather Burners, The**	*wes AYC*
—	5	8	**Leopard Man, The**	*cri-mel A*
—	2	5	**Let's Have Fun**	*mus-com AYC*
1	9	5	**Life Begins at 8:30**	*dr A*
—	1	5	**Life of Simon Bolivar**	*hist A*
—	2	5	**London Blackout Murders**	*war-cri-dr A*
—	2	2	**Lost Canyon**	*wes AYC*
—	5	11	**Lucky Jordan**	*war-mel A*
—	—	6	**Man of Courage**	*cri-mel A*
—	5	1	**Mantrap, The**	*cri-mys AYC*
—	7	6	**Margin for Error**	*war-dr A*
—	5	3	**McGuerins from Brooklyn, The**	*com A*
—	9	5	**Meanest Man in the World, The**	*com A*
2	4	6	**Mission to Moscow**	*propaganda A*
8	6	1	**Moon Is Down, The**	*war-dr A*
4	12	1	**More the Merrier, The**	*war-com A*
—	5	1	**Mountain Rhythm**	*war-com AYC*
—	7	6	**Mr. Big**	*mus-com A*
2	2	2	**Mr. Lucky**	*cri-war-com A*
—	2	3	**Mug Town**	*cri-com AYC*
—	6	2	**Murder in Times Square**	*cri-mel A*
5	7	1	**My Friend Flicka**	*dr AYC*
—	1	6	**My Son, the Hero**	*war-com A*
—	5	6	**Mysterious Doctor, The**	*mys-mel A*
1	12	—	**Next of Kin, The**	*war-mel A*
—	4	5	**Night Plane from Chungking**	*war-mel AY*
—	5	4	**Night to Remember, A**	*mys AYC*
—	3	4	**No Place for a Lady**	*cri-mys AY*
—	6	8	**Once Upon a Honeymoon**	*war-dr A*
—	5	5	**One Dangerous Night**	*mys AYC*
3	2	—	**Our Lady of Paris**	*doc AYC*
—	2	5	**Outlaw, The**	*wes A*
—	4	4	**Over My Dead Body**	*mys-com A*
1	5	4	**Ox-Bow Incident, The**	*wes-mel A*
—	13	4	**Palm Beach Story, The**	*com A*
—	1	2	**Passion Island**	*mel A*
—	5	3	**Payoff, The**	*cri-mel A*
—	8	2	**Pilot No. 5**	*war-mel AYC*
—	9	8	**Pittsburgh**	*mel A*
—	5	3	**Power of the Press**	*cri-mel AYC*
—	6	6	**Powers Girl, The**	*mus-com A*
—	4	2	**Prelude to War**	*doc A*
1	7	2	**Presenting Lily Mars**	*mus-com A*
—	3	4	**Purple V, The**	*war-mel AYC*

A	B	C		
—	2	4	**Queen of Broadway**	*mel A*
—	5	6	**Quiet Please, Murder**	*war-cri-mel A*
—	2	4	**Raiders of San Joaquin**	*mus-wes AYC*
—	3	2	**Rangers Take Over, The**	*mus-wes AYC*
3	11	3	**Reap the Wild Wind**	*mel AYC*
—	3	5	**Redhead from Manhattan**	*com A*
—	8	7	**Reunion (in France)**	*war-mel A*
—	6	2	**Reveille with Beverly**	*war-mus-com AYC*
—	6	3	**Rhythm of the Islands**	*mus-com A*
—	5	3	**Rhythm Parade**	*mus-com A*
—	4	—	**Ride, Tenderfoot, Ride (re-issued)**	*mus-wes AYC*
—	3	1	**Riders of the Northwest Mounted**	*mel AYC*
—	5	—	**Ridin' Down the Canyon**	*mus-wes AYC*
1	1	3	**Russian Story, The**	*hist A*
—	5	—	**Saddles and Sagebrush**	*mus-wes AYC*
6	6	1	**Saludos Amigos**	*car AYC*
—	3	5	**Salute for Three**	*war-mus-com A*
—	3	3	**Santa Fe Scouts**	*wes AYC*
—	3	8	**Sarong Girl**	*mus-com A*
—	5	2	**Secrets of the Underground**	*war-mel AYC*
—	3	6	**Seven Miles from Alcatraz**	*war-mel A*
8	8	—	**Shadow of A Doubt**	*cri-dr A*
—	4	2	**Shantytown**	*com AYC*
—	1	5	**She Has What It Takes**	*mus-com A*
—	6	4	**Sherlock Holmes and the Secret Weapon**	*war-mel AY*
1	5	2	**Sherlock Holmes in Washington**	*war-mys AYC*
—	—	—	**Simon Bolivar (See Life of Simon Bolivar)**	
—	6	8	**Slightly Dangerous**	*com A*
5	—	—	**So Proudly We Hail**	*war-dr AY*
2	8	4	**Something to Shout About**	*mus-com A*
3	4	1	**Somewhere in France**	*war-mel AY*
1	4	—	**Song of Texas**	*mus-wes AYC*
2	6	2	**Spitfire**	*war-biog AYC*
—	2	3	**Spy Train**	*war-mel A*
—	4	1	**Squadron Leader X**	*war-mel AY*
5	7	2	**Stage Door Canteen**	*war-mus-com AY*
4	9	2	**Stand By for Action**	*war-dr A*
2	14	2	**Star Spangled Rhythm**	*war-mus-com A*
1	5	1	**Stormy Weather (all negro)**	*mus-dr A*
1	6	1	**Stranger in Town, A**	*cri-com AYC*
—	3	2	**Submarine Alert**	*war-mel A*
—	3	1	**Sundown Kid, The**	*wes AYC*
—	2	4	**Swing Shift Maisie**	*war-com A*
—	4	2	**Swing Your Partner**	*mus-com AYC*
—	5	6	**Tahiti Honey**	*mus-com A*
—	8	5	**Tarzan Triumphs**	*war-mel AYC*
—	6	3	**Taxi, Mister**	*com A*
5	10	1	**Tennessee Johnson**	*hist-dr AYC*
—	3	2	**Terror House**	*mys-mel A*
—	1	4	**That Nazty Nuisance**	*war-com AYC*
1	5	1	**They Came to Blow Up America**	*war-mel AYC*
—	11	5	**They Got Me Covered**	*war-com A*
7	5	1	**This Land Is Mine**	*war-dr A*
—	7	7	**Three Hearts for Julia**	*war-com A*
—	4	2	**Thumbs Up**	*war-mus-com AYC*
—	8	2	**Tonight We Raid Calais**	*war-mel A*
—	4	4	**Two Senoritas from Chicago**	*mus-com A*
—	7	1	**Two Tickets to London**	*war-mus-dr AYC*
—	1	7	**Underground Agent**	*war-mel AYC*
—	5	3	**Undying Monster, The**	*mys-mel A*
—	6	1	**We are the Marines**	*doc AYC*
—	1	2	**West of Texas**	*mus-wes AYC*
—	9	3	**When Johnny Comes Marching Home**	*war-mus-com AYC*
—	9	3	**Whistling in Dixie**	*cri-mys AYC*
—	4	10	**White Savage**	*mel A*
—	—	5	**Wild Horse Stampede**	*wes AYC*
—	—	7	**Wings Over the Pacific**	*war-mel A*
—	3	6	**Wrecking Crew**	*mel AY*
—	1	3	**Yanks Ahoy**	*war-com AYC*
—	3	1	**You Can't Beat the Law**	*mel A*
—	5	5	**Young and Willing**	*com A*

The Consumers' Observation Post

[Continued from page 4]

These tell in a graphic way, with large pictures, certain desirable fundamental practices in food preparation and cookery. For example, using fruit juice fresh, keeping it covered and cold if it must stand; cook in the peel if you can; cut vegetables just before using; cook vegetables in least practicable amount of water; in cooking fatty foods, or with fats, keep heat moderate, etc.

* * *

AN EXEMPTION from the usual rule of having to turn in an old battery in order to buy a new storage battery, has been made for farmers, who can buy new or rebuilt storage batteries for use on electric fences and other farm equipment without turning in an old one, by making certification in proper form. It is to be expected that ordinary portable radio sets will be regarded as non-essential, and it is only for farm radios, for the present at least, that production of an adequate supply of dry-cell batteries is contemplated.

* * *

PRESSURE SAUCEPANS that foresighted consumers were able to buy before production was shutdown by government order are a great boon to the busy housewife who wishes to cook fresh vegetables in a hurry. Their use is so comparatively new that research on the subject has only recently begun to appear in print. According to a study at the University of Illinois, peas cooked in a pressure cooker were superior to those cooked by the "open kettle" method. Turnips, beans, carrots, and spinach were of about equal quality to those cooked in the ordinary way. Broccoli, cauliflower, cabbage, and asparagus, however, cooked in a pressure cooker were inferior to the same vegetables cooked in an open kettle. The retention of ascorbic acid (vitamin C) ranged slightly higher for vegetables cooked by the pressure method.

* * *

"THERE IS ONLY ONE WAY to keep cheese after it has been cut," writes a subscriber. "I got the information from a Vermont cheesemaker after I had lost plenty of cheeses. You must brush melted paraffin over all exposed edges. That's all."

* * *

DISRUPTION OF OUR MARKETING SYSTEM is one of the sizable obstacles to a rapid post-war recovery, according to Tradeways, Inc., a New York analyst service. Filling stations, hardware stores, shoe stores will be much reduced in number, one of its bulletins points out. There will be only a few scattered agencies for selling automobiles, household appliances, radio and musical instruments, and office appliances. The rebuilding of the complex system of retail distribution will take much time and money over a long period.

COMING In the Consumers' Research Bulletin

WOMEN'S WALKING SHOES - report on 15 well-known makes!

Tell your friends who may be interested in studying our report before they spend Ration Stamp 18 and

Please Pass on the handy subscription blanks found at the bottom of the

NEXT PAGE

PRISM BINOCULARS at $45 plus tax are available from C. H. Adelmann, 1 Beekman Street, N.Y.C., an optical-instrument man who has been mentioned in CR's Bulletin as available for repairs on field glasses, binoculars, opera glasses, telescopes, etc. His family has been in this business since 1860. At this time, there is a pronounced scarcity of competent workmen in this field for repair work, and of used binoculars of good grade available for sale. Mr. Adelmann reports that he has on hand a few 6 x 30 old-style Bausch & Lomb, separate eye adjustment for both eye pieces; 6 x 30 Crown (separate eye adjustment); and 6 x 24 Leitz (center screw and separate adjustment for right eye). [The first number gives the magnification, the second the diameter of the object glass in millimeters.]

There are also prism monoculars (one barrel of a binocular glass) available, and for most users, these will serve every purpose, and much more economically than the regular prism binoculars. A 6 x 30 monocular is available at $15, and a 12X at $20. Mr. Adelmann will handle orders sent in by mail.

* * *

WAR BOND OWNERS are urged by the St. Louis Better Business Bureau to keep their bonds in a safe deposit box or store them with a bank which will care for them and give the owner a receipt. After the war ends there will doubtless be many get-rich quick investment schemes to separate the unwary owner from his bond. The Better Business Bureaus should be consulted for a check on the reputation and previous business record of anyone urging that you invest your hard-earned War Bonds, before you make any commitments.

* * *

DO YOUR CAKES come out light or dark? Burnt on top and underdone on the bottom? Do they run over the top of the pan or shrink from the sides and pull away from the pan? These and other problems that may bother the cakemaker are analyzed and illustrated in a little booklet entitled "Don't Blame It On the Oven", 10c from General Electric Company, Product Service Division, Bridgeport, Conn. Cakes baked in new shiny pans, for example, will have light-colored bottoms and sides. Dull, discolored tin pans will produce cakes with dark bottoms and sides. Home economists will find the pamphlet helpful in classroom work; research workers in foods and cookery will find its information of much interest.

* * *

NEW PRODUCT: Those who need a simple, inexpensive exposure meter may consider the Argus (Argus, Ann Arbor, Mich.) selling for 25 cents. This meter, which is of the extinction or optical-wedge type, small and convenient in shape (3-1/2 x 1-1/4 inches, in a leather case), was found to be satisfactory and considered a good buy. Though inexperienced photographers often place absurd reliance on exact exposures as indicated by a meter, this is a mistake, for even with color film, which has much less latitude than ordinary film, a difference of a full stop (100%), using the same shutter speed, has surprisingly little effect on the result, as long as the exposures are both reasonably on the "straight" portion of the characteristic or D-log E curve.

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PHONOGRAPH RECORDS

By Walter F. Grueninger

Please Note: Prices quoted do not include taxes. In the ratings AA indicates highly recommended; A, recommended; B, intermediate; C, not recommended.

COLUMBIA has issued five sets which they call Record Classics. That simply means that every month they press quantities of a previously catalogued set, design a new illustrated-cover album, and bring their advertising skills into play.

The March issue of their house-organ, *Coda*, explains that a Record Classic is chosen "on its merits as music and as a performance. . . . . and its potential appeal to the generality of music-lovers."

On the whole, distinctive sets have been chosen for promotion in this group. Since they are widely available, which is not always the case with records nowadays, they deserve examination. Should you decide to buy any, however, try to procure the earlier pressings. The album may be less colorful, but the records are from the same originals, and the record surfaces are likely to be better.

The first four ratings comprise the Record Classics issued to date.

COLUMBIA RECORD CLASSICS

Bach: *Brandenburg Concertos.* Busch Chamber Players under Adolf Busch. Concertos 1-4, 11 sides, Columbia Set 249. $8.25. Concertos 5 & 6, 12 sides, Columbia Set 250. $6.50. The value of these secular works does not rate as high with me as most of Bach's well-known sacred works, but praise for the performances (England, 1935) recorded here comes easy, for Busch has made a specialty of playing the solo violin parts and conducting these concertos. The performances even surpass those I heard the Busch Chamber Players give last season. Begin with Set 249.
Interpretation AA
Fidelity of Recording A

Mahler: *Das Lied von der Erde.* Vienna Philharmonic Orchestra with Thorborg (contralto) and Kullman (tenor) under Walter. 14 sides, Columbia Set 300. $7.50. A gloomy "song-symphony" consisting of six songs, alternately for tenor and contralto, with symphony orchestra accompaniment. Recorded during a concert performance in Vienna on May 24, 1936. Soloist Charles Kullman nearly matches superb Kerstin Thorborg and the orchestra. The recording falls short of the average made in a studio. Nevertheless, connoisseurs who regard this as Mahler's masterpiece have prized this set since its release.
Interpretation AA
Fidelity of Recording B

Prokofieff: *Concerto in D for Violin and Orchestra.* Szigeti (violin) and London Philharmonic Orchestra under Beecham. 5 sides, Columbia Set 244, $3.25. The composition dates from 1913. After one hearing of this brilliant performance you will understand why Prokofieff says "Szigeti is the greatest interpreter of my concerto." The work is characterized by complex harmonies, dissonance, novel instrumental effects, and other qualities most laymen term "modern." Critical opinion in general regards this as a distinctive work.
Interpretation AA
Fidelity of Recording AA

Schubert: *Symphony No. 5.* London Philharmonic Orchestra under Beecham. 8 sides, Columbia Set 366. $4.50. Half an hour of lilting melodies that are a joy to hear. Beecham conducts with understanding. Two inconsequential excerpts from *Rosamunde* appear on the eighth side. Of the Record Classics issued to date, it seems to me this one possesses the greatest "potential appeal to the generality of music lovers."
Interpretation AA
Fidelity of Recording A

POPULAR & MISCELLANEOUS

Grouya-Loesser: *In My Arms* & **Steiner-Gannon:** *It Can't Be Wrong.* Dick Haymes & the Songspinners (singers). 2 sides, Decca 18557. 50c. The Petrillo ban, which for twelve months has prevented members of the American Federation of Musicians (instrumentalists) from recording, has driven manufacturers to vocal arrangements of currently popular songs. That's likely to stop, too, for Petrillo has just decreed that he does not want "name" singers to make any more records with purely vocal accompaniment. In order to maintain working relations with instrumentalists on profitable radio programs it is believed singers will obey Petrillo, leaving the field of popular recorded music to manufacturers who get master-records from Mexico and other undisclosed sources. The arrangements on this disc do not match those on Decca 18556 discussed below. Moreover, the performance of *In My Arms*, a catchy waltz, suffers from insufficient vocal verve. *It Can't Be Wrong*, from the motion picture Now Voyager, lacks rhythm stress and appealing harmonic arrangement. Surfaces are good.
Interpretation B
Fidelity of Recording AA

Rubens: *Dejalo Correr* & **Cortazar:** *Ay! Jalisco no te Rajes.* Francisco Canaro and His Orchestra. 2 sides, Decca 21298. 50c. Lively numbers in Decca's Hispania Series. Small orchestra with male singers. **Interpretation AA**
Fidelity of Recording A

Tobias-Simon-Tobias: *Wait for Me Mary* & **Warren-Gordon:** *You'll Never Know.* Dick Haymes & The Songspinners (singers). 2 sides, Decca 18556. 50c. The vocal arrangements of these pleasant tunes are simple, in good taste. The soloist possesses some of the qualities of Bing Crosby without Bing's vocal personality. Surface noises are barely audible. **Interpretation A**
Fidelity of Recording AA

Boogie Woogie Piano. Montana Taylor, Speckled Red, Romeo Nelson, Cow Cow Davenport (piano solos). 8 sides, Brunswick Album 1005. $3.50. Four exponents of "stomping 'em down" submit samples of their style recorded in 1929. Only for the boogie-woogie fan. Surfaces are noisy.
Interpretation A
Fidelity of Recording C

Cab Calloway & His Orchestra. 8 sides, Brunswick Set 1004. $3.50. Cab Calloway has carved a niche for himself, be it ever so tiny, as the preeminent scat singer of our day. These recordings waxed in 1930 and 1931 present a fair cross section of his raucous style. Included on the best disc are *Minnie the Moocher* and *Kickin' the Gong Around* (Brunswick 80015). Other discs offer *St. Louis Blues, Bugle Call Rag, You Rascal You, Some of These Days, St. James Infirmary, Nobody's Sweetheart.* Surface noises are audible. **Interpretation A**
Fidelity of Recording B

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